The Mining Journal,

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

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No. 2430.—VOL. LII. LONDON, SATURDAY, MARCH 18, 1882. [WITH SUPPLEMENT.] {PRICE ..... SIXPENC PER ANNUM, BY POST £1 4s

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120 Arendal.	200 Gt. So. Mysore, 4s.	75 Prince of Wales, 11s.
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50 Carnarvon Cop., 15s	20 Killifreth.	25 S. Indian Gold, 19s. 6
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50 D'Eresby Mount. 18s 9	100 Last Chance, 10s.	50 So. Darren, 17s. 6d.
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150 Devon Friendship.	30 Marke Valley, 15s.	15 S. Penstruthal, 5s.
50 East Blue Hills, 12s.	50 Morfa Du, 9s.	50 Santa Barbara, 20s.
50 East Caradon, 10s.	150 Mysore Reef, 5s. 6d.	50 So. Devon Uni., 22s.
60 E. Chiverton, £1 10s.	50 No. Herodsfoot, 6s.	70 Sortridge, 9s.
20 East Lovell, £1½.	75 Nouv. Monde, 6s. 3d.	100 Tanker. Gt. Con., 6s 3
50 E. Roman Grav., 16s 3	25 No. Penstruthal, 10s	50 United Van Con.
75 English Australian Gold, 10s. 6d.	30 New W.Caradon, 3s.	45 West Phœnix, 25s.
50 Frontino, £3.	80 Pandora, 8s. 9d.	50 West Caradon.
25 Glenrock, 20s.	50 Polrose, 5s., call paid.	20 West Polbreen, 27s 6d
70 Glenroy, 7s. 6d.	50 Port Phillip, 4s.	50 Wheal Crebor, £2¾.
30 Gold Coast, 30s.	50 Potosi, 15s.	50 West Crebor, 5s.
50 Grogwinion.	75 Parys Copper, 10s. 3d	25 West Kitty, £8½.
	50 Panulcillo, £5 17s. 6d.	100 Wheal Jewell, 3s. 9d.
		25 Wheal Kitty, £1¼.

, SHARES SOLD FOR FORWARD DELIVERY (ONE, TWO, OR THREE MONTHS) ON DEPOSIT OF TWENTY PER CENT.
, SPECIAL BUSINESS at CLOSE PRICES in all Market TIN, COPPER and LEAD SHARES.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.
ESTABLISHED 1842.

RAILWAYS — FOREIGN BONDS — SPECIAL BUSINESS.
Fortnighly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

AMERICAN AND CANADIAN STOCKS AND SHARES—SPECIAL BUSINESS.
Fortnightly Accounts opened on receipt of the usual cover.
JAMES H. CROFTS, 1, FINCH LANE, LONDON.

INDIAN GOLD MINES.—SPECIAL BUSINESS in:—

Cootacovil.	Indian Kingston.	Rhodes Reef.
Devala Moyar.	Indian Trevelyan.	South-East Wynaad.
Devala Central.	Mysore.	South Indian Gold.
Great Southern Mysore	Mysore Reefs.	Tambracherry.
Indian Glenrock.	Ooregum.	Wynaad Perseverance.
Indian Phœnix.	Organos.	

At CLOSE MARKET PRICES, free of commission.
, Reliable information given on any of the above. A daily price list issued giving closing quotations. SPECIAL BUSINESS in La Plata, Rio Tinto, Frontino and Bolivia, Potosi, Ruby, Nouveau Monde, and Richmond.
, SHARES IN THE ABOVE INDIAN OR OTHER GOLD AND SILVER MINES SOLD FOR FORWARD DELIVERY ONE, TWO, OR THREE MONTHS ON DEPOSIT OF TWENTY PER CENT.
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A List of Investments free on application.
MR. BUMPUS has SPECIAL BUSINESS in the undermentioned:—

100 Almada, 7s. 3d.	20 East Lovell.	100 Potosi, 16s.
50 Arendal.	50 East Blue Hills, 12s.	150 Port Phillip, 3s. 9d.
60 Bratsberg, 27s.	100 E. Wheal Rose, 16s 3d	70 Pen-yr-Orsedd, 10s.
50 Bedford United.	75 Eberhardt, 10s.	40 Panulcillo, £6 5s.
100 Callao Bis, 12s.	30 East Van, 12s. 6d.	50 Parys Copper, 11s. 6d.
150 Chontales, 3s.	50 Frontino, £3½.	100 Prince of Wales, 11s.
5 Carn Brea.	100 Gold Coast.	75 Rhodes Reef, 16s.
75 Carnarvon, 15s.	5 Great Laxey, £17.	25 Ruby, £3½.
30 Coplapo, £3¼.	50 Hingston Down, 19s 6	15 Richmond, £11½.
3 Cape Copper.	100 Indian Glenrock, 20s.	100 South Indian, 21s.
40 Colorado, 52s. 6d.	100 Indian Trevelyan, 14s	50 South Devon, 21s.
80 Devon Great United.	400 Javali.	100 Tankerville, 6s.
100 Devala-Moyar, 21s. 3d	25 Killifreth, £2¾.	15 Tincroft.
2 Dolcoath.	30 Leadhills, £2¾.	10 Van £7½.
70 Dev. Friendship.	100 La Plata, 43s. 9d.	25 Wheal Crebor, £2½.
25 Devon Consols, £7¼.	70 Mysore Gold, 21s.	50 W. Godolphin.
50 Derwent, 19s. 6d.	50 Marke Valley, 14s. 6d	5 Wheal Agar, £16.
50 Don Pedro, 7s.	10 Mona, £6½.	50 Wheal Jewell, 10s.
35 East Roman Gravels, 15s. 6d.	100 Nouv. Monde, 5s. 6d.	20 Wh. Grenville, £11¾.
	20 New Quebrada, £4 2 6	50 Wheal Boys, 40s.
	50 New Trumpet, 21s.	

SPECIAL BUSINESS, at close prices, in the SHARES of all the principal HOME and FOREIGN MINES.
Mr. BUMPUS devotes special attention to these Securities, and is in a position to afford reliable information and advice to intending investors and others.

IMPORTANT TO INVESTORS.—Shares in SOUND DIVIDEND and PROGRESSIVE MINES (particularly TIN and COPPER) should be bought at present prices, as many of them are likely to have a considerable rise before long. There is every probability that much higher quotations will rule within the next few months.
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100 Almada.	20 Frongoch.	20 New Cook's Kitchen.
50 Bedford.	100 Gold Coast.	100 Ooregum.
150 Bratsberg.	110 Guinea Coast.	50 Potosi.
100 Chontales.	50 Gawton.	53 Parys Copper.
50 Canada Gold.	10 Goginan.	100 Rhodes Reef.
50 Callao Bis.	100 Gt. Southern Mysore.	50 South Devon.
75 Don Pedro.	50 Hingston Down.	40 South Tolcarne.
40 Devala Gold.	50 Hoover Hill.	70 Tankerville Gt. Con.
100 Devon Friendship.	100 Isabelle.	20 Wheal Crebor.
30 Drakewalls.	150 I. X. L.	50 West Polbreen.
50 East Blue Hill.	50 Kapanga.	10 West Kitty.
60 East Caradon.	40 Langford.	10 Wheal Kitty.
20 East Chiverton.	35 La Plata.	80 Wheal Sisters.
75 East Roman Gravels.	50 Mount Carbis.	40 Wheal Jane.
110 Exchequer.	50 Marke Valley.	100 Wheal Lusky.
65 Eberhardt.	70 New West Caradon.	30 Ystwith.

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Where prices are not inserted, the market price of the day will be taken, or offers may be made:—

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100 Bratsberg Cop., 28s. 6	50 Indian Glenrock Gold 20s.	100 Prince of Wales Cop. 9s. 9d.
30 Carnarvon Copper, 14s	20 Indian Trevelyan Gold.	10 Richmond Sil.
60 Callao-Bis Gold, 11s	10 Killifreth Tin, £2⅝.	25 Ruby.
35 D'Eresby Mount. Lead £1.	20 La Plata Lead, £2 3/16	20 So. Devon Cop., 22s.
25 Devala Gold.	20 Leadhills, £2¾.	30 South-East Wynaad Gold 23s. 6d.
150 Devon Friend., 7s.	30 Mona Con. Cop., 22s.	20 So. Indian Gold, 20s
50 Devon Gt. Uni. 12s. 6	10 Morfa Du, 8s. 6d.	50 Sortridge Copper and Tin.
10 Devon Con. Cop., 7⅞.	70 Mysore Gold.	20 Tamar Silver-Lead,
50 Don Pedro Gold, 6s 3	25 Michipicoten Co., 21s 3	40 Tanker. Gt. Con., 6s
15 East Chiverton.	60 Mysore Reef Gold, 5s 3	30 Van and Glyn Lead, 17s. 6d.
20 East Lovell Tin, £1½.	10 New Kitty Tin, £2½.	50 W. Crebor Cop., 4s 9d
120 East Roman Gravels Lead, 15s. 3d.	60 New West Caradon Copper, 3s. 3d.	20 West Phœnix Tin and Copper, 25s.
100 East Rose Lead, ⅞ pd.	70 No. Herodsfoot, 5s	5 West Kitty Tin, £8½.
60 East Blue Hills Tin, 11s. 6d.	100 Nouveau Monde Gold	15 West Polbreen Tin, £1⅜.
50 Eng.-Australian Gold 10s.	100 No. D'Eresby Lead, 12s. 6d.	30 Wheal Jane Tin.
20 Frontino Gold.	50 Polrose Tin.	10 Wheal Agar Tin.
50 Gawton Copper, 10s. 6	40 Potosi Gold, 15s. 6d.	10 Wh. Crebor Cop., £2½
40 Gunnislake (Clitters) Copper.	70 Parys Copper, 10s. 6d	30 West Lisburne Lead
75 Herodsfoot Lead.	30 Pioneer Copper and Lead, 15s.	20s.

Many of the above shares can be sold for settlement by arrangement at the middle or end of April on payment of 20 per cent. deposit. Shares not found in the above list may be purchased on application.
N.B.—The present is a most favourable time to purchase shares in ESTABLISHED TIN and COPPER MINES at cheap prices.
Mr. Alfred E. Cooke is buyer of shares in all the LEADING MINES at current market price.

WHEAL CREBOR. PRINCE OF WALES. SORTRIDGE. DEVON FRIENDSHIP. BEDFORD. WEST CREBOR.	Mr. ALFRED E. COOKE is visiting the Mines in the TAVISTOCK DISTRICT. Full reports will appear in the INVESTORS' GAZETTE OF NEXT WEEK.
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Bedford United, 36s.	Gawton, 10s.	Parys Corporation 10s.
Bratsberg, 27s. 6d.	Gunnislake (Clit.), £2⅞	Prince of Wales, 7s. 6d.
Devala Moyar, 20s.	Hingston Down, £⅞.	Richmond, £11¼.
Devon Consols, £7⅞¼.	Indian Glenrock, 18s. 9	Ruby, £3⅜.
Devon Friendship, 6s.	Isabelle, 9s. 9d.	Souback.
Devala Central, 10s. 6d.	Killifreth, 53s.	South Devon, 20s.
Don Pedro, 6s.	Kapanga, 5s. 9d.	Sortridge, 16s.
Eberhardt, 9s. 6d.	La Plata, 43s.	Tankerville, 5s.
East Blue Hills, 11s. 6d	Leadhills, 45s.	Van and Glyn.
East Rose.	Last Chance, 10s.	Wheal Crebor, £2¼.
Frontino, £2⅞.	New Kitty, 37s. 6d. New Ruby, 30s.	Wheal Jane, 20s.

BANKERS: LONDON AND WESTMINSTER.

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Mr. REYNOLDS refers his readers to his article on page 315.

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Fortnightly Accounts opened in all Stock Exchange Securities on receipt of the usual cover.
BANKERS: LONDON AND WESTMINSTER, Lothbury.

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100 Almada, 5s. 6d.	100 I.X.L., 3s. 3d.	20 Ruby, new, £2½ pm.
25 Bedford Unit., 35s.	30 Leadhills, £2 5s.	50 South Darren, 21s.
75 Corporation South Australian Copper.	80 No. Herodsfoot, 7s 6d	20 South Crebor, 10s.
50 Carnarvon Cop., 15s	50 N. Trumpet Con.	25 Tankerville, 7s.
100 Dev. Friendship, 6s. 3	40 N. W. Caradon, 4s.	100 Victorine, £1½.
95 Devon Gt. Uni., 12s 6	20 New Kitty, £1 18s. 9d	50 West Crebor, 4s. 9d.
100 Exchequer, 3s. 3d.	100 Nouveau Monde, 6s. 6	50 West Lisburne, 20s.
40 East Blue Hills, 12s. 6	50 P. of Wales, 10s. 3d.	25 Wheal Jane, 22s. 6d.
20 Grogwinion, 10s.	130 Parys Corpora., 10s. 6	20 Wheal Crebor, £2 12 6
25 Hingston Down, 20s.	15 Pandora, 7s. 6d.	250 Yorke Peninsula Ordinary, 4s. 6d.
	50 Pestarena, 4s. 3d.	
	20 Ruby, £3 12s.	

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240 Devon Friendship.	110 Organos Gold, 21s.	20 Roman Gravels, £9¼.
160 Derwent, 17s. 6d.	Old Shepherds (12s 6d paid), 5s. 6d.	100 Tankerville.
120 East Blue Hills.	Old Owlacombe (£1 paid), 2s. 6d.	10 Van.
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50 Devon Friendship, 6s. 6d.	50 Hingston Down, 17s 6	50 Sortridge, 6s. 6d.
10 Devon Consols, £7¼.	50 Leadhills, £2 10s.	50 South Darren, £2.
5 Dolcoath, £82.	50 Langford, 7s.	120 South Devon, 22s.
20 East Lovell, 30s.	10 Mellanear, £3 15s.	100 West Crebor, 6s.
10 East Pool, £58.	50 New W. Caradon, 3s.	20 West Goldolphin £2.
20 E. Blue Hills, 11s.	50 Parys Copper, 10s.	10 West Kitty, £8½.
30 Frontino, £2 18s. 9d.	50 Prince of Wales, 9s 9d	20 Wheal Agar, £15½.
100 Gawton, 10s. 6d.	20 Red Mount., £2¼ pm	20 Wheal Crebor, £2½.
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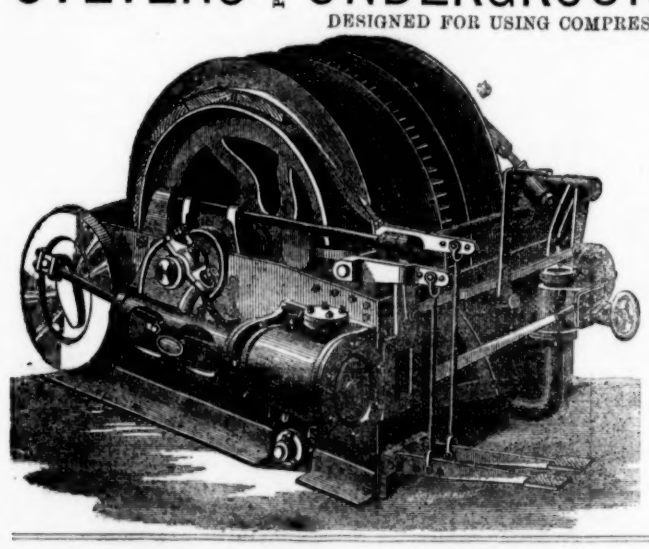

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No. 1 size, 7 in. single cylinder, with 2 ft. drums.
No. 2 size, 9 in. single cylinder, 2 ft. 6 in. drums.
A,— 6 in. double cylinder, with 2 ft. 3 n drums
B,— 8 in. " " 3 ft. 0 in drums.
C,—10 in. " " 3 ft. 6 in drums.
D,—12 in. " " 4 ft. 6 in drums.
E,—14 in. " " 5 ft. 0 in. drums.

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NGINEERS, MAKERS OF PUMPING AND WINDING MACHINERY, AND FORGINGS OF EVERY DESCRIPTION.

NEWPORT, MON.

Agents for the six Northern Counties—
TANGYE BROTHERS, ST. NICHOLAS BUILDINGS, NEWCASTLE-ON-TYNE.
[This Advertisement appears fortnightly.]

VENTILATING TUBES AND AIR VALVES FOR MINES.

TRADE MARK A STAR — *Tubes.* — TRADE MARK A STAR

GAS, STEAM, WATER, AND GALVANIZED TUBES AND FITTINGS, PATENT LAP-WELDED IRON, AND STEEL TUBES.

For Marine and Locomotive Boilers, Hand-rails, Ship Pillars, Coils, &c.
Tubes and Fittings for all Engineering Purposes.

TAUNTON and HAYWARD, Star Tube Works, Birmingham.

Registration of New Companies.

The following joint-stock companies have been duly registered:—

THE ROSEMELLYN CHINA-CLAY AND FIRE-BRICK COMPANY (Limited).—Capital 60,000*l.*, in shares of 1*l.* The business of mining and trading in china-clay and stone, potter's clay, or any other clays and substances. The subscribers (who take one share each) are—A. M. M. Forbes, 97, Cannon-street; J. T. Hall, 16, Charles-street; P. Tarbutt, 46, Queen Victoria-street; C. Quentin, 46, Queen Victoria-street; F. Crowe, 22, Westbourne Park-road; F. G. Newman, Woodford; J. Hilton, 28, Threadneedle-street.

GIBSON AND SON (Limited).—Capital 90,000*l.*, in shares of 15*l.* To acquire and continue a hosiery business established at Nottingham. The subscribers are—W. Gibson, Nottingham, 267; W. Foster, Nottingham, 200; W. Philips, Nottingham, 100; R. Pillotson, Nottiagham, 200; E. L. Gibson, Nottingham, 200; S. H. Gibson, Nottingham, 200; W. Gibson, jun., 6A, Victoria-street, 100; R. Barber, Nottingham, 100.

ADVANCE AND DISCOUNT ASSOCIATION (Limited).—Capital 20,000*l.*, in shares of 5*l.* To acquire, carry on, and extend the business of the Central Loan, Discount, and Investment Company (Limited).—The subscribers are—S. Tilford, Liverpool, 40; H. Holttum, Egremont, 60; G. Richardson, Liverpool, 40; N. Edwards, Liverpool, 20; H. Sarson, Liverpool, 20; A. C. Tremphasure, Liverpool, 74; D. W. Parson, Liverpool, 10; J. M'Adam, Liverpool, 5.

THE WELSH SLATE AND SLAB WORKS COMPANY (Limited).—Capital 60,000*l.*, in shares of 10*l.* Buying and selling slates and slabs, the manufacture of chimney pieces, billiard table beds, &c. The subscribers are—G. H. Ellis, Festiniog, 10; W. Jones, Festiniog, 10; J. Roberts, Festiniog, 5; W. Hughes, Festiniog, 10; E. Merdith, Festiniog, 10; D. G. Davies, Festiniog, 5; H. Parry, Festiniog, 5.

THE PARISIAN AND CONTINENTAL SANITARY COMPANY (Limited).—Capital 25,000*l.*, in shares of 5*l.* The business of sanitary and hygeinic engineers, dealers in apparatus and appliances, &c. The subscribers (who take one share each) are—J. L. Tourton, Paris; H. Tozer, Catford; G. Wreford, Bromley; E. Henson, 25, Charlotte-street; S. R. Harbert, Walworth; S. F. Stewart, 1, King's Arms Yard; T. Bewley, 18, York Buildings.

THE MYNACH VALE MINING COMPANY (Limited).—Capital 5000*l.*, in shares of 10*l.* The purchase and acquisition of mines of lead in the county of Cardigan and elsewhere, and any lands, buildings, and hereditaments in England and Wales. The erection of buildings, plant, &c., disposing of all or any of the properties, or carrying on all operations connected with mining, smelting, refining, or otherwise dressing and dealing with ores and minerals. The subscribers (who take one share each) are—T. Wilson, St. Michael's Hamlet, oil merchant; J. B. Williams, Liverpool, coal agent; J. Coltart, Liverpool, rope manufacturer; T. Goffey, Liverpool, merchant; A. W. Chalmers, Liverpool, clerk; W. H. Wilson, St. Michael's Hamlet, oil merchant; J. T. N. Thomas, Liverpool, merchant. The following are the first directors:—Messrs. Wilson, Williams, and Goffey, the qualification being fixed at 20 shares.

THE OREGON LAND AND TIMBER COMPANY (Limited).—Capital 600,000*l.*, in shares of 10*l.* To acquire the Dalles Military Road Company's lands, containing some 592,557 acres. The subscribers (who take one share each) are—R. P. Staines, St. John's Wood; H. M. Guillemard, 3, Copthall Chambers; T. Watson, Mildmay Park; P. L. Elms, Crouch End; E. C. Friend, South Norwood; H. Howse, Upper Clapton; E. S. C. Staines, St. John's Wood.

CARFERAL WATER FILTRATION COMPANY (Limited).—Capital, 100,000*l.* in shares of 5*l.* To manufacture, produce, trade, and deal in filtering apparatus of all kinds. The subscribers (who take one share each) are—J. Fisher, 39A, Threadneedle-street; G. Seaton, 15, St. Helen's-place; E. C. Owen, 13, Gloucester-terrace; E. L. Paraire, 36, Mornington-crescent; P. A. Scratchley, 4, The Sanctuary; D. Urquhart, 10, Cheltenham-terrace; W. M. Parker, 96, Newgate-street.

J. H. NEWMAN (Limited).—Capital 15,000*l.*, in shares 1*l.* Acquiring and continuing a tea, grocery, and general provision dealer's business at Exeter. The subscribers are—J. H. Newman, Exeter, 7250; W. Horner, Exeter, 1; E. P. Tregale, Exeter, 1; W. G. Mole, Exeter, 1; T. W. Heywood, Exeter, 1; A. H. King, Exeter, 1; J. W. Hiscox, Topsham, 1; W. Lawton, Heavitree, 1.

SALFORD AND MANCHESTER LOAN AND DEPOSIT COMPANY (Limited).—Capital 5000*l.*, in shares of 1*l.* To carry on a general financial business. The subscribers are—L. Hughes, Salford, 50; C. Shorrocks, Moss-side, 10; J. H. Burton, Manchester, 20; R. Burton, Manchester, 10; J. A. Dawson, Oldham, 10; J. Westall, Salford, 25; W. Clayton, Salford, 5; F. Furness, Salford, 50.

THE PANDORA THEATRE (Limited).—Capital 200,000*l.*, in shares of 20*l.* To construct and maintain a theatre on the north side of Leicester-square. The subscribers are—the Duke of Beaufort, Badminton, 20; Lord Londesborough, Londesborough, 5; Sir Charles F. Cunninghame, 55, New Bond-street, 20; A. Thompson, Army and Navy Club, 10; F. A. Favre, Turf Club, 10; Earl of Donoughmore, Knocklofty, 10; J. S. Ward, Lincoln's Inn-fields, 5.

THE SWAVESEY AND GENERAL FARMING AND DAIRY COMPANY (Limited).—Capital 30,000*l.*, in shares of 1*l.* The usual business of a farming and dairy company. The subscribers are—J. Osborn, Daintree, 300; A. W. Attrill, Swavesey, 5; J. C. Dawson, 19, Mark-lane, 1; H. Hopking, 19, Mark-lane, 1; J. H. Dunger, Walworth, 1; E. W. Cox, Kentishtown, 1; H. Clarkson, 4, Walbrook, 5.

THE NORTH ENGLAND TEA AND COFFEE COMPANY (Limited).—Capital 10,000*l.*, in shares of 10*l.* To carry on the business of wholesole and retail tea, coffee, cocoa, drugs, hay, tobacco, spirits, wines, &c., merchants. The subscribers (who take one share each) are—M. Watson, Burnley; T. B. Jinks, Burnley; T. Watson, jun., Burnley; H. Roberts, Burnley; E. Watson, Burnley; C. Riley, Burnley; M. Watson, jun., Burnley.

THE LONDON AND PROVINCIAL HOUSE, LAND, MORTGAGE, AND INVESTMENT COMPANY (Limited).—Capital 200,000*l.*, in shares of 5*l.* To carry on all or any of the businesses usually carried on by land and building companies in all branches. The subscribers (who take 20 shares each) are—E. Shawbrooks, Newcastle-on-Tyne; E. Towns, Newcastle-on-Tyne; W. Walker, Newcastle-on-Tyne; W. H. Moffatt, Dulwich; W. Berry, Hull; J. Emerson, 79½, Gracechurch-street; H. Peck, Dalston.

THE NORTH-EAST YORKSHIRE CONSERVATIVE NEWSPAPER AND PRINTING COMPANY (Limited).—Capital 30,000*l.*, in shares of 5*l.* To establish, print, and publish a daily paper. The subscribers are—W. B. Richardson, York, 200; D. Cayley, jun., York, 20; J. Metrose, York, 50; W. C. Worsley, York, 20; A. H. Russell, York, 20; G. A. Duncombe, York, 20; W. Dove, York, 50; J. F. Taylor, York, 50; W. Cattley, Ashfield, 40.

THE ELWYN VALLEY SLATE AND SLAB QUARRIES COMPANY (Limited).—Capital 25,000*l.*, in shares of 1*l.* To acquire 12 acres of land in Carmarthenshire, for the purpose of carrying on the ordinary business of a quarrying company. The subscribers (who take one share each) are—R. Hills, Holloway; J. Mason, 1, Pinner's-court; H. G. Lawson, Shoreham; S. Benstall, Oriental Club; H. Jordan, 37, Walbrook; F. Mason, Union-court; F. W. Wisdom, 7 and 8, Great Winchester-street.

DE EERSTE FABRIEKEN IN DE ZIND AFRIKAANSCHE REPUBLICK (Limited).—Capital 50,000*l.*, in shares of 10*l.* To acquire, use, and deal in concessions for the manufacture of spirituous liquors from vegetable products, also sugar, and any other concessions. The subscribers (who take one share each) are—T. Lewis, 41, Holborn Viaduct; A. Valminey, Albemarle Hotel; B. Lewin, 46, Holborn Viaduct; W. Holmes, 20, Threadneedle-street; F. S. Pilditch, Hammersmith; T. R. Bradbury, Harrow; E. Marcus, 3 Bingley-street.

SHIP "CONNEMARA" COMPANY (Limited).—Capital 5200*l.*, in shares of 10*l.* The purchasing, owning, and working said ship. The subscribers (who take one share each) are—R. Hadden, Liverpool; W. Wainwright, Liverpool; G. Holme, Liverpool; H. Nathan, Liverpool; S. Rigby, Liverpool; H. Wainwright, Liverpool; R. Holme, Liverpool.

THE CASTLEGATE STEAMSHIP COMPANY (Limited).—Capital, 33,000*l.*, in shares of 1*l.* The business of a shipowner in all branches. The subscribers are—R. Tomlinson, Liverpool, 500; C. Tomlinson,

Liverpool, 500; R. Wakeham, Liverpool, 25; R. J. Johnstone, 28 Leadenhall-street, 50; P. Sutherland, jun., Liverpool, 50; W. K. Jackson, Liverpool, 25; T. Reay, Carlisle, 50.

WATSON BROTHERS' MINING CIRCULAR.

WATSON BROTHERS,
MINEOWNERS, STOCK AND SHARE DEALERS &c
1, ST MICHAEL'S ALLEY CORNHILL, LONDON

Nearly twenty years ago the weekly information which had previously been published for a great number of years in WATSON BROTHERS' Mining Circular was transferred to the columns of the *Mining Journal*, with the following announcement.

In the year 1843, when mining was almost unknown to the general public attention was first called to its advantages, when properly conducted, in the "Compendium of British Mining," commenced in 1837, and published in 1843, by Mr. WATSON, F.G.S., author of "Gleanings among Mines and Miners," "Records of Ancient Mining," "Cornish Notes" (first series, 1862), "Cornish Notes" (second series, 1863), "The Progress of Mining," with Statistics of the Mining Interest, published annually in the *Mining Journal* for 21 years, &c., &c. In the Compendium, published in 1843, Mr. WATSON was the first to recommend the system of a "division of small risks in several mines, ensuring the success in the aggregate," and Messrs. WATSON BROTHERS have always a selected list on hand. Perhaps at no former period in the annals of mining has there been more peculiar need of honest and experienced advice in regard to mines and sharedealing than there is at present; and from the lengthened experience of Messrs. WATSON BROTHERS they are emboldened to offer, thus publicly, their best services and advice to all connected with mines and mining.

Messrs. WATSON BROTHERS are daily asked their opinion of particular mines, as well as to *recommend* mines to invest or speculate in, and they give their advice and recommend mines to the best of their judgment and ability, founded on the best practical advice they can obtain from the mining districts, but they will not be held responsible, nor subject to blame, if results do not always equal the expectations they may have held out in a property so fluctuating as mining.

The great extension of mining business, the difficulty so often complained of by country shareholders in getting accurate and disinterested information as to the state of Cornish and Foreign Mines, and of the financial and real position of mining companies generally, have induced Messrs. WATSON BROTHERS to make their Circular now published in the *Mining Journal* more extensively known, and to state—

That they issue daily to clients and others who apply for it a Price List (as supplied to most of the London and country papers), giving the closing prices of Mining Shares up to Four o'clock.

They also buy and sell shares for immediate cash, for the usual fortnightly settlement in all Mines dealt in on the Mining and Stock Exchanges, at the close market prices of the day, free of all charge for commission. They deal also, on the same terms, in the Public Funds, Railways, Telegraphs, and all other Securities dealt in on the Stock Exchange.

Having agents in all the mining districts, they are constantly getting mines inspected for their own guidance, and will also obtain special reports of any particular mine for their clients, for the inspecting agent's fee of £2 2s.

Messrs. WATSON BROTHERS take this opportunity of stating that on July 1 they took into partnership Mr. H. J. DEAN, who has been for a number of years associated with the firm, and Mr. W. H. H. WATSON, who has had some years experience of practical mining and engineering in Cornwall, and is the son of the senior partner. The firm will still be called that of "Watson Brothers."

The number of weekly communications received from almost every part of the world in regard to remarks in this Circular indicate so plainly how much they are read (and, we trust, appreciated) that they will be continued by the same writer.

Indeed, while new blood is introduced to attend to the more laborious and mechanical details of the business, the old will have more time to devote to heir different departments.

It was no unusual thing in the olden times to get gold from copper. Queen Elizabeth took from the Earl of Northumberland "his rich copper mines of Keswick (according to Plowden), because of their holding so much silver and gold in the ore." Boyle in his "Useful Philosophy" says, "A friend of mine found in his own land a parcel of ore, which seemed to be copper. After fusion it yielded very good copper, but the person to whom he committed the examination, being extraordinarily skilful, found besides the copper a considerable quantity of silver, and in that silver a good portion of gold." Henry VIII., in the first year of his reign, constituted the Duke of Bedford and others Commissioners of *all* the mines, not only of gold and silver, but of tin, lead, and copper in England and Wales, upon payment to the King of the fifteenth part of the gold and silver, and to the lord of the soil the eleventh part. Queen Elizabeth received for every hundredweight of gold ore 8 ozs. of gold, and of silver the 20th part. In the old grants from Queen Elizabeth to the incorporated society of "Mines Royal," and also of the society of "Mineral and Battery Works," which was confirmed by James I. to the Earl of Pembroke, Lord Cecil, and others, certain counties and "the Principality of Wales" were granted as being the places where gold and silver mines were most abundant. History, in fact, shows that gold was constantly found in the copper and other ores of Wales, and there is no reason whatever why it should not be found again, while the scientific appliances of the present day should make it much easier and less expensive to get. The great thing at Parys will be to find it in the halvans, or poor copper ores at surface, of which there are said to be millions of tons. At the time the mines were flooding the market with copper, and the very streams around it were so impregnated with metal that it was profitable to precipitate it from them, all the copper ores below a certain standard of produce were left unsold, and the accumulation is the vast heap referred to as halvans, and these have for many years past been giving the present company about 1000*l.* a year from the water alone which flows through them. This water, chiefly rain water, becomes so strongly impregnated with copper that as it flows through the halvans into pits prepared for it with old iron eats up the latter, and forms copper precipitate of 14 or 15 per cent. This is sold about once in a quarter, and we have before explained that after passing through these pits the water flows from the iron into other receptacles, and deposits yellow ochre, of which the company sells large quantities.

There is no legal difficulty now in working gold from copper mines.

Aberllyn, forming part of Gwydyr Amalgamated, has the run of the great Gorse lode of D'Eresby Mountain through the entire sett, and hitherto the shallow workings have yielded only blende, of which there are large quantities in the mine. Several parcels have been sold up to 3*l.* 17s. 6d. per ton; this was when spelter was at 20*l.*, now it is much less, and blende little more than half the price, consequently the search has been carried on for lead, and in last week's report the agent writes that the rise in No. 2 level was yielding saving work for lead and blende. Clementina, another mine belonging to the amalgamated company, will shortly be making returns of lead. This mine is to the north of D'Eresby Mountain, as Aberllyn is to the south, with intervening setts.

The lode in 102 west at Prince of Wales is 3 ft. wide, very promising. The 102 east, 2 ft. wide, is producing splendid stones of tin and copper ores. Other points of operation worth 52*l.* per fathom in the aggregate.

The lode at D'Eresby Mountain (No. 5 south) continues worth 5 tons per fathom, and stopes above No. 6, still further south, have improved to 2 to 3 tons per fathom. As the ground rises considerably going south, owing to the hill, upwards of 15 fms. of backs will be gained in this direction.

Spelter has advanced about 10s. this week, and we have good reason for believing that it will gradually advance till it reaches 20*l.* per ton, and this will be a good thing for mines returning blende.

We have received this week the results of five experiments on the poor ores of Langford. Matte No. 1 contains 26 oz. 2 dwts. 16 gr. of silver per ton; No. 2, 49 oz.; No. 3, 32 oz. 13 dwts.; No. 4, 65 oz. 6 dwts. 16 gr.; and No. 5, 52 oz. 5 dwts. 8 gr. of silver per ton. The machinery for pumping, &c., is now on the mine, and in course of erection.

We believe that West Caradon is about paying cost, with prospects of doing much better, and there is no reason whatever for the present low price of shares.

There was a good lode in 80 north of North Herodsfoot, worth in some places 2 tons 9 cwt. per fathom; it was then heaved by a cross joint. The cross cut to find it beyond the heave is now letting out a strong stream of water, and the ground, we are informed, is more intermingled with quartz, and promises well for the lode, which may be cut any day. The 117 has also improved this week.

THE ECONOMIC GEOLOGY OF INDIA.

An interesting series of papers and memoirs on "The Diamonds, Coal, and Gold of India: their Mode of Occurrence and Distribution," by Mr. V. BALL, the officiating deputy superintendent of the Geological Survey of India, was noticed in the *Mining Journal* a short time since, when it was stated that the object of the work was to furnish a hand-book to the detailed accounts officially published by the Survey and by other authorities in numerously scattered publications. To one of these detailed accounts—A Manual of the Geology of India, Part III. Economic Geology, by V. Ball, M.A., F.G.S. Calcutta: Office of the Geological Survey of India. London: Trübner and Co., Ludgate Hill—published by order of the Government of India, some further reference may now be made. It is pointed out that the Geological Survey of India had its origin in the desire of Government to have the coal fields of the country systematically investigated, and the work of the Survey was for some time wholly devoted to this task. It was only after the principal coal fields had been mapped and described, or were well in hand, that the general examination of the geology of India was taken up, an increase to the staff having been sanctioned for the purpose. A summary of the mineral resources of India, was, of course part of the design; but as the least attractive part of the performance, its publication was postponed under various pretexts more or less justifiable. Dissatisfaction with the best account that could be given was, observes Mr. H. B. Medlicott, F.R.S., the indefatigable superintendent of the Survey, a chief cause of reluctance. What real information they possessed was already published in greater fulness than could be rendered in a summary for the whole of so great an area, and that information related almost entirely to coal and iron, for the rest there were only in most cases dry facts insufficient for any safe practical judgment. It is certainly not necessary that he should explain why, in the nature of the things, this contrast obtains; why the naturally exposed evidence of vein deposits (from which most metals are derived) is very much less satisfactory than in the case of stratified deposits, but so it is. Without more or less extensive surface clearings or trial sinking it is seldom possible to give an opinion worth having on a mineral lode. It has very rarely (and with sufficient reason) been the desire of Government to undertake this preliminary mining or prospecting, and there are as yet no mining operations in the country from which it would be possible to learn something of the habits in the Indian rocks, the indigenous workings which were once active having long since been abandoned.

Except in the case of the precious metals the mere fact of former workings covering a large extent of ground gives very little security as to the strength of the ore, for it is certain that with his small plant and low demands the native can derive profit where larger works would fail. Thus it happens that the information available regarding the metalliferous deposits of India (iron excepted) is defective with respect to their probable value, although the dry facts of the occurrence of ores in many places are abundant enough. A complete collection of those isolated observations involved long and patient search through many papers published and unpublished. This task has now been very thoroughly accomplished by Mr. Ball, who in the volume now under consideration has careful arranged all the scattered information in groups of subjects and of districts indicating the relations to what is known of the geology of the country; and, as Mr. Medlicott justly observes, the student as well as the man of enterprise will long owe him gratitude for the great store of facts thus brought within easy reference. The volume is divided into 17 chapters, and it will be preferable instead of recapitulating the titles to give a brief reference to each. The habit of speaking contemptuously of the mineral deposits of the country having grown up so strongly, the question of the value of particular deposits is, says Mr. Ball, now far too often unfavourably prejudged; but he considers that were India wholly isolated from the rest of the world, or were her mineral productions protected from competition, there cannot be the least doubt that she would be able from within her own boundaries to supply very nearly all the requirements in so far as the mineral world is concerned, of a highly civilised community; but the consumer would probably have to pay more than he has at present.

Many of the deposits of the metallic ores in India are undoubtedly poor from the point of view of the European miner, still the native miner and smelter by an enormous amount of very hard work were enabled to produce the metals which they sold at very high prices, but the production per man was so small that these artizans managed only to secure for themselves a scanty subsistence. By foreign competition the trades of the indigenous miner and smelter have been as regards those who worked all the metals except iron almost completely crushed out of existence; and the iron industry has likewise become extinct throughout large tracts of India, and in the remainder it is only kept alive by a hard struggle. As English lead and English copper have undersold the indigenous metals at their places of production, so English iron has supplanted native iron in many parts of the country, and bids fair, provided an easily malleable iron can be sold at a cheap rate, to do so in all. The importance of the question of the development of the indigenous mineral resources of India will be apparent from the subjoined abstract statement which Mr. Ball gives of the value and amount of imports for the official year 1879-80:—

	Quantity.		Value—Rs.
Precious stones, including pearls	—	.....	15,52,799
Coal, coke, and patent fuel .....Tons	608,760	.....	1,17,40,715
Petroleum .....Gals.	7,888,247	.....	48,19,079
Sulphur .....Cwts.	13,319	.....	81,290
Arsenic .....Cwts.	300	.....	5,256
Mercury .....Lbs.	531,393	.....	5,88,436
Gold, including coin.....	—	.....	2,05,03,929
Silver, including coin	—	.....	9,60,50,019
Copper, ditto .....Cwts.	386,173	.....	1,62,01,547
Brass ..... „	10,279	.....	5,38,484
Lead ..... „	73,480	.....	10,62,958
Zinc..... „	127,138	.....	14,43,599
Tin ..... „	20,840	.....	9,88,459
Iron..... „	2,111,156	.....	1,22,93,847
Lime and chalk..... „	43,739	.....	19,294
Salt.....Tons	352,238	.....	76,25,321
Saltpetre .....Cwts.	3	.....	49
Borax ..... „	31	.....	922
Building stones, millstones, grindstones, &c.....Cwts.	17,423	.....	93,414
Total (=17,560,942*l.* 14s.).....Rs.			17,56,09,427

By the light of modern knowledge it is possible to read many allusions as to the existence of mineral productions in India which were hitherto obscure, and it is shown that India has not only produced gold since the the very earliest times of which there is any record, but that there were also in all probability mines from which silver was obtained in some quantity. Hitherto mining for metallic ores by British companies has not been successful in India, though coal and salt mining and the quarrying of building materials have been carried on either by the Government or by private companies, with, in many cases, very great profit. It would seem, however, he adds that as regards the metals there is a new era about to commence, and that the capabilities of India not only as a gold-producing country, but also in reference to other metals, will in the course of the next few years be for the first time fairly tested. Mr. Ball has set himself the task, by no means an easy one, of rescuing from oblivion the facts and history connected with recorded discoveries, so that they may be readily utilised. There may, he adds, be important deposits of metalliferous ores which have not yet come to light; in fact that this is so is certain to be the case but that mere superficial exploration, without the aid from artificial cuttings for canals or railways, or from the laying bare of natural sections from landslips will add many completely new localities to those where such deposits are known to occur, is less probable than might be supposed, and for this reason the Indian peasantry are observant and curious about these matters, and in most cases where it has been possible for them to make anything out of such deposits they have done so in a small way. From time immemorial, too, the country has been traversed by peripatetic metallurgists, the workers in iron, and through their agency deposits have been brought to light, the knowledge of which has become public property through the agency of district officials. Of course, as to the actual extent of such deposits where they have not been visited or reported on by experts our knowledge even as regards the mere superficial appearances is in many cases very defective, while regarding the majority of the others we simply have no information as the result of actual workings. At the present stage of our knowledge, when so little has been done by actual mining operations, we are not in a position to adopt a strictly censorial style, and reject as utterly worthless of mention deposits at localities where only mere traces of ore are known to exist. Mr. Ball has, therefore, adopted the safer and more useful plan of stating exactly what has been recorded, leaving it to possible future exploration to determine doubtful questions as to value. That the author has adopted a proper principle must be acknowledged, and the admirable manner in which he has developed it will be ascertained from the notice of the several chapters, which will be given next week.

CANADIAN MINES, AND MINING LAWS.

As many British capitalists are interested in Canadian mining enterprise the abstract of general information respecting the mines and mining laws of the Province of Quebec, published by the Crown Lands Department in the Canadian Mining Review, will be valuable for reference. It is explained that the chief provisions of the Quebec General Mining Act of 1880 are the declaration of ownership by the Crown and reserve of all mines not especially granted and the mode of procedure ordered for the sale of mining rights on unpatented lands acquited for agricultural purposes. For imposition of royalty under Order in Council, if deemed advisable. For granting licences to mine for gold or silver on public lands, and on conceded portions of Seigniory Rigaud, Vaudreuil, and other private lands. For the sale of lands as mining locations and for imposition of penalties for contravention of Act.

Under this Act, parties holding letters patents for lands granted for agricultural purposes may acquire the right to work any mines of gold or silver thereon, without license, by paying the Commissioner of Crown Lands a sum sufficient to make up, with the amount paid before the issue of patent, the price of $2 per acre. In the case of "free grants" the whole price of $2 per acre must be paid Censitaires in the seignories in which the Crown holds mining rights may acquire these rights by paying $1½ per acre for the whole of their land, or at least 100 acres; and the seignoir or proprietor of the unconceded portion of a seignory may do the same on paying $2 per acre; the extent over which such rights can be acquired being, however, limited to 400 acres, or in special cases 800 acres.

If a mine of any kind be discovered and worked on land sold for settlement but not patented, the settlement duties not being performed, the sale may be cancelled, unless the land be paid for in full as a mining location. Mining locations, which may be of any extent up to 400 acres, or in special cases 800 acres, may be acquired by addressing a letter to the Commissioner of Crown Lands, specifying the lot or lots required, and transmitting at the same time:—1. The full price of the location at the rate of $3 per acre, if it is to be mined for phosphate of lime (this price was fixed by O. C. of March 23, 1881); $2 per acre, if to be mined for asbetos or gold or silver (price fixed by O. C. Oct. 7, 1880); $1 per acre, if it is to be mined for inferior metals or other minerals, or deposits of any substance of appreciable value. 2. A specimen of the mineral for which the land is to be worked, with an affidavit identifying it as having been taken from the land applied for.

Mines of gold or silver on public or private lands may be worked by parties taking out licenses for themselves and employees, costing $2 for each person for three months, if the mining is to be done on private lands, and $4 if on public lands. The size and position of claims on public lands worked under such licenses are regulated by the Act, or determined by the mining inspector according to circumstances. The localities in the province of Quebec in which minerals are chiefly found are—Gold: Eastern townships, especially the counties of Beauce and Compton.—Phosphate of Lime: Counties of Ottawa and Argenteuil.—Asbestos: Counties of Megantic and Wolfe.—Iron: Counties of Ottawa, Montcalm, St. Maurice, Champlain, Charlevoix, and Saguenay.—Copper: Counties of Bagot, Megantic, and Sherbrooke.—Galena: Counties of Ottawa (lake Temiscamingue), Gaspé, and Rimouski.—Plumbago: County of Ottawa; and mica, counties of Berthier, Ottawa, and Megantic.

MOTIVE POWER FROM HYDRO-CARBURETTED AIR.

Gas engines possess the incontestable advantages that coal furnaces and superintendence are not required, and that they consume gas when working only; but they possess the inconvenience of requiring special apparatuses for generating the gas, which requirement has heretofore limited their application to large towns. Attempts have been made to use hydrocarbons to actuate these engines, but besides the fact that the consumption is as costly as with gas engines the want of security and guarantee against explosions has caused the use of those materials to be generally abandoned. The engine constructed according to the invention of Messrs. ETEVE and LALLEMENT, mechanical engineers, of Paris, has, it is claimed, all the advantages of gas engines, without their disadvantages, or those of engines consuming hydrocarbons. It is of simple and economical construction generally, similar to that of ordinary steam engines. It generates itself the hydrocarburetted fluid required for its operation, and consequently ceases its consumption thereof immediately it is brought to rest. This generation of the hydrocarburetted fluid is effected by forcing air under pressure into a receiver containing a hydrocarbon—such as petroleum, for example. In mixing this hydrocarbon with air under the same pressure in the engine cylinder, so as to pulverise in some measure the distributed hydrocarbon, and to fill with this mixture the space swept through by the piston during a portion (two-fifths, for example) of its stroke, whether in front or behind the piston. An electric spark fires this mixture, and its instantaneous expansion produces a more or less powerful dynamic effect upon the piston, according as the pressure of the air admitted is higher or lower, and the volume of the mixture introduced greater or smaller.

The quantity of hydrocarbon used for each stroke of the piston is very small, in fact, only just what is required to render the mixture inflammable. The result is that the generator is very small, and allows of the engine being moved very easily from place to place. We, therefore combine in our invention the qualities required by domestic engines—namely, simple rough construction, very small cost, easy transport, instantaneous generation of hydrocarburetted air, absolute security and production of motive power anywhere at a very cheap rate. All the operations are effected automatically, no superintendence is required, and any person can put the engine in motion or stop it. The more the resistance increases the longer the admission ports for the hydrocarbon and air under pressure remain open, consequently the more inflammable and the more powerful is the mixture introduced. The engine is self-regulating, and constantly proportions the quantity and doses of the mixture to the resistance to be overcome.

The engine consists of a cylinder, a frame or base plate with feet, a crank shaft, connecting rod, piston, piston rod, slide bars, and fly wheel, similar to an ordinary steam-engine. A second connecting rod converts the rotary movement of the crank shaft into oscillations of a lever, which by another connecting rod gives motion to a second lever, which by means of a pump, bellows, or other suitable contrivance, draws air and compresses it into an air receiver on which is a valve for limiting the pressure of the air. A pipe conveys the compressed air from the air receiver into a hydrocarbon reservoir, the said compressed air passing to the upper surface of the petroleum therein; a pipe which goes nearly to the bottom of this reservoir conveys the petroleum therefrom to the front and back of the piston. A pipe with branches conveys the compressed air from the hydrocarbon reservoir to the inlet slide valve which works on the cylinder face pierced with ports for the admission of air and petroleum. The exhaust is governed by a separate slide valve. These slide valves may be worked by eccentrics in the usual way, or by other suitable means. A magneto-electric apparatus is driven by the engine, and is connected to an induction bobbin which, by

FOREIGN MINES.

ST. JOHN DEL REY.—Telegram from Morro Velho, dated Rio de Janeiro, March 11: Produce for the month of February, 20,000 oits.; value 7750*l.*; yield, 3·8 oits. per ton. Rains, sump deeply flooded; 10 heads Morro Velho revolving. Stamps at work.

PITANGUI GOLD.—Cable message from the agents of the company in Rio de Janeiro, dated March 11, advise the amount of produce obtained for the month of February as being 1000 oits. of gold. The value of this produce would amount, at 3*s.* 6*d.* per oitava, to 425*l.* sterling.

LA PLATA.—Statement for week ending March 11:—Ore purchased, 903 tons; ore smelted, 991 tons; silver produced, 15,900 ozs.; lead, 117 tons; silver-lead bars consigned to refiners, 107 tons; value of consignment, $31,300, equal to 6520*l.*

ALMADA AND TIRITO.—Telegrams from Mr. Clemes. Jan. 18: Profit for December, $12,000. Feb. 28: Profit for January, $7500.

RICHMOND CONSOLIDATED.—Week's run from one furnace $25,000, from 497 tons of ore. Refinery, $25,000.

— **Superintendent's Weekly Report:** Wm. Harris (foreman), Feb. 20: I have to report the following advance and the present condition of the dead work for the week ending Feb. 20:—The 200 rise near shaft has been advanced 30 feet. Holed into bottom of Old Flat Chamber, on 15th, in high grade ore, looks well. The 600 north drift from west drift has been run 16 ft. in limestone, somewhat improved. The 600 rise near No. 14 chute 7 ft. in limestone, unfavourable; stopped on 20th. The 700 north drift from winze from No. 13 chute has been run 5 ft. in limestone; no change. The 700 winze from south-west drift from north drift has been sunk 5 ft. in limestone; unfavourable, stopped on 20th, commenced drifting from bottom of winze. The 800 north drift from quartzite drift has been run 9 ft. in limestone; no change. The 800 south drift from chute from 700 level has been run 14 ft. in limestone; improved. The 900 north drift from west drift has been run 16 ft. in limestone; no change. The 1200 north drift from shaft has been run 20 ft. in limestone; no change.

PIERREFITTE.—The manager reports (March 13) as follows:—No. 7 stope below No. 1 level, has fallen off a little in value during the past week, and is now worth 4½ tons of lead ore and 1 ton of blende per cubic fathom. But No. 1 stope in the bottom of the same level has greatly improved, and is now worth 8 tons of lead ore and about 1½ ton of blende per fathom. The lode in the winze below the No. 2 level, which is being sunk to communicate with the No. 3 level, fully maintains its value, and I estimate it at 20 tons of blende and 3 tons of lead ore: deep for length 4½ metres, and breadth 2 metres. No. 1 stope at the mouth of this level is turning out splendid work, and is now worth 8 tons of lead ore and blende per cubic fathom. The above are the only points we are operating on at present, and until our new machinery is completed, which will be very shortly, we shall not increase our staff at the mine. We have broken 60 tons ore, and 130 tons has been sent to the floors during the week. The last lot of lead ore for sale has been delivered at the station, and in a few days we shall send a lot of blende of about 70 tons, which is now ready for market. We have dressed 8 tons of lead ore and 12 tons of blende, and 12 tons of blende re-dressed by the machines and 10 tons of blende has been hand-picked.

ISABELLE (Gold and Silver).—We have to-day (March 16) received from our manager at the mines the following telegram:—"Shipped on the 11th inst. bullion $670.

— **Mr. Lewis Chalmers, Feb. 20:** To-morrow I shall ship to San Francisco bar No. 9. Assay value $351·39, and have 3000 lbs. cement copper on hand. Enclosed is mill foreman's report. Mr. Jones is doing good work.—Mill report: The mill has been running quite steadily during the past week, with the exception of 37 hours stoppage for the purpose of cleaning the boilers and making necessary repairs to the machinery. The furnace is chloridising up to 91 per cent. working raw ore (without calcining); melted bar of No. 9 to-day, 869 ozs., and have 3500 lbs. cement copper on hand ready to be sent forward. This is from five stamps. As the mine will furnish an abundance of ore, the labour cost of running our 18 stamps would not be materially increased. All we require to increase the capacity is additional furnaces, agitators, and precipitating tanks, which would enable us to more than treble the output at a very slight increase in cost.—G. W. Jones.

FLAGSTAFF.—M. Gundersen, Feb. 19: I have the following report to present for the week ending to-day. We have advanced the 6th level 13 ft., making the entire length 142 ft. Nothing new has been encountered, nor any particular change in formation. The two cross-cuts on this level, of which I spoke in my last report as having a full face of iron, and stated that it was my intention to sink on it, which was my orders from the Professor; this proved to be only a pocket, and pinched out to a few inches. The first ledge of iron on this level, the one I raised on, and much the stronger of the two, I am going to sink on, have had four men at work this week making an excavation, timbering, &c., and will begin to sink to-day. In the rise on the same level and vein I run a cross-cut from toward the south-east, as at the time of starting it gave promise of high grade ore, but the iron has pinched out, and the formation has changed, so I am satisfied we can expect nothing from it, so have abandoned it. In my report last week I made a mistake in giving the length of the rise on the 5th level; it was reported as being 82½ ft. in length, should have been 72½ ft. But little has been done in it this week, the miner that worked in it being away; the entire length is 76 ft. This cross-cut by the time the hanging-wall is reached will prove whether or not there is any high grade ore between the 5th and 6th levels, as it corresponds with the rise on No. 6. The rise on the 5th level is up 26 ft., following a seam or ledge of white cemented formation, which in all parts of the mine has been found to cut off the ledge of high grade ore, which can only be found by following them up till they pinch out; 17 ft. was made in this rise this week. The cross-cut on the 4th level shows a gain of 11 ft. for this week, making its entire length 134 ft.; no change in the formation. The cross-cut towards the hanging-wall on the same level was advanced 3 ft. this week. There is no change in the cross-cut on the 1st level, which was advanced 13 ft. this week. I succeeded this week in getting the pair of new compressors in running order, but cannot afford to run them much, as they require so much water and wood to furnish sufficient power to run them. This is due to two causes, being new they of course do not run as smoothly as the old ones do, and being considerably larger would necessarily require more pressure, which cannot be furnished by the same steam cylinder and pistons that run the old and smaller ones. I had an assay made of a sample taken from the large body of iron of which I have made mention heretofore, lying between the 3rd and 4th levels, with the following result—2 per cent. lead, 3·84 ozs. silver, 52·3 per cent. iron. Trace of gold. The past week has been very stormy, so we have had no mail for three days. I have the same number of men as last reported engaged on the same work.

RUBY AND DUNDERBERG.—Report on mines for the week ended Dec. 15th:—Dunderberg: The upraise from the drift at the bottom of No. 7 winze has been advanced 8 ft. during the week. The ore at this place is very poor at present, a very small portion of it being of sufficient value to ship. There is quite a favourable change in the west cross-cut from the 700 ft. level. The rock is much softer, and is highly stained with oxide of iron; progress this week 19 ft.—total, 120 ft. from the 700 ft. level. The west cross-cut from the 600 ft. level, 75 ft. north of No. 2 winze, has been advanced 12 ft. this week; total 98 ft. The upraise (No. 2) near the end of the above mentioned cross-cut, is now 56 ft. above the 600 ft. level. The ore at present is about 2 ft. thick, of good quality, with a large body of low grade ore and iron of no value lying beneath it; there are now three upraises from the cross-cut, Nos. 1, 2, 3. No. 1 is at a point 18 ft. from the 600; No. 2 is 50 ft.; and No. 3 (already referred to), 84 ft. west from the 600. No. 1 is now up 12 ft.; the ore is about 2 ft. wide, of good quality. No. 2 is up 15 ft., and is now in very soft and broken up ground; the ore is very irregular, and varies in size from 2½ ft. to 6 in. in width. The prospects in this part of the mine are certainly better. Have shipped 4 tons of ore, and have about 20 tons at the mine which will be shipped when the roads are passable. There are 23 men and 13 tributers at work.

— Copy of Telegram from Eureka to-day (March 14):—The variations of development of our late discovery show continued improvement. The ore body is widening.

EUREKA (NEVADA) SILVER.—Report on mines for the week ended Feb. 20: Bald Eagle: The intermediate drift below the 150 ft. level has been advanced 6 ft. this week; total, 34 ft. The indications for ore are somewhat better. The fissure is about 1 ft. in width, filled with ledge matter. As intimated in my last, work has been suspended in this drift, and a new drift commenced in a southerly direction from the 150 east cross-cut; progress this week, 12 ft.—Williams' Egg: The east drift from the winze, 20 ft. below the 2nd level, continues in good ore the full size of the drift. There is no change in the stope 30 ft. above the 2nd level. I have engaged four additional men to work above the 1st level on the same terms. Have shipped 11 tons ore this week, and have about 12 tons at the mine ready for shipment.

COLORADO UNITED.—Advices from the mine are as follows:—Feb. 18: The 12 drift, east of S. O. shaft, is in now 144 ft., with 2 in. of mineral; four men working. The 12 drift, west of S. O. shaft, is in 95 ft., but at present shows no mineral. The Nos. 1 and 2 stopes, worked by six men each, average about 2 in. mineral. The winze connecting 11 and 12 drift is down about 30 ft., with an average of 2½ in. of mineral. The tributers' places about the same.

— Feb. 25: The foreman reports no change in the appearance of the mine mine since last writing.

CHONTALES.—The directors are in receeipt of advices from their manager, dated 5th February last, who reports that during the previous month the ground in Consuelo had been hard and unproductive. No ore had been crushed during the month. The cost at the mines was 295*l.* The manager had resolved to push on the deep level at Consuelo with all dispatch, and he hoped soon to report better prospects.

POTOSI.—The resident manager, under date Feb. 7, writes:—We have a stock now of about 300 tons of ore at our mill dump, and 150 tons at mine dump, so that we are well provided against any case of emergency.—Chile Mine: I have the pleasure to enclose the report of Capt. Thomas Hampton, which I am sure will be read with much interest. To dispel all false alarms let me assure you that there need be now no apprehension felt as to the state of the mine. It is perfectly safe, and with an uninterrupted judicious management will give excellent results before long. All our three shafts are perfectly open, and hoisting is going on through all of them. This will prove sufficiently that the mine has not crushed in, and the lode is improving in width and quality all along the mine.—The railway is in good working order now, and I am glad to say causes no trouble whatever. By keeping everything in good repair, and by paying proper attention to the work, as we do now, much loss of time and sudden heavy expenditure is avoided.—Machinery: The new boiler is being put together as rapidly as possible, and considerable work has been done during the last fortnight. It is impossible to bind one oneself down to dates in this country, but I have every reason to believe that by about the middle of March all the machinery will be running. The locomotive, Edith Helen, still does its duty, and since some new tubes have been put in, and its boilers cleansed, there has been no further trouble. The new locomotive has not yet arrived, but I expect it every day. The Chile machinery is working well in every respect. Health is very good throughout.

— Capt. T. Hampton, Feb. 7: Main Shaft: I am sorry to say since we left the mines in June last year only 8 ft. of ground has been sunk in this shaft, but preparations are now being made to sink this shaft with all possible dispatch. Furthermore, believe that Capt. Sweet has left the lode standing in the footwall. This will be proved in a few days, when I shall be able to report more fully to you on this point. Referring you to my report of June 5 last, you will find that a winze was sunk west of the main shaft in order to leave a pillar of ground standing against the shaft 16 ft. deep and 8 ft. wide. We have already broken through to the winze, and are now opening up a good stope west of the winze, where the lode is 2 ft. wide, and produces some good rock for the mill. The shaft, as far as timbering is concerned, is in very good order, and will stand for at [illegible] years with a few minor repairs. A great mistake made by Mr. Symons and Captain Sweet was insufficient sinking.—No. 1 Shaft: This shaft has been sunk since the 17th 10 ft.; the lode is 4 ft. wide, and has a very fine appearance. This, with the main shaft, will be pushed on with all vigour, in order to open some good stoping ground. I am sorry to say that Captain Sweet took away a part of the pillar that was left by us when sinking below the No 6 level. But this shaft is now in good order, all the necessary timber is being fixed, good stulls are also being put in, and in a few days will be filled from the No. 3 level, and the shaft and mine will be perfectly secure; and, with good speed, in three or four months we shall open up between the No. 1 and air shaft some splendid stoping ground. The lode between the above-named shaft will average in width 4 ft. I am fully satisfied that with judicious management and tact the mine will be brought into a good paying state. Although very little attention has been paid to timbering the shafts this will be overcome in a short time, and the output of quartz greatly augmented.—Air Shaft: Nothing has been done in sinking this shaft, as we have been engaged driving through a piece of ground both east and west of this shaft in order to leave down the water at the bottom level and pillars each side of the shaft; the lode here is 3½ ft. wide, but very hard for breaking. The stope east of air shaft produces some very rich rock; the lode is fully 5 ft. wide. We shall commence to sink the shaft again during the coming week. All the works are progressing very satisfactorily, and everything is being done to carry on the works as economically as possible.

HOOVER HILL.—Extracts from letter from resident manager, dated Feb. 26: Gallimore: The boring-machine will go to work again in a few days. We have had to wait a long time for the new piece getting here from New York. The ground in the end of the cross-cut remains the same as last reported, with the thin lead of visible gold holding on.—Tunnel: During the week we suddenly broke into softer ground in the heading part of the drift, with a large increase of water. We also pierced through a mud slide of some thickness. Altogether the ground appears to be rapidly changing for the better, and I believe we are not far from the clay-slate channel in which so many of the old workings are situated. Having pierced through the most difficult and tedious part of our work, I sincerely hope we shall be able to find some good ore in the clay channel ahead of us. The barrel of ore will leave here on Tuesday next, Feb. 28. The directors have received the barrel of sulphurets shipped on Jan. 30, by the Persian Monarch.

DON PEDRO.—Mine captain's monthly report for Jan.:—Drainage: Machinery worked well in the beginning and middle part of the month, and kept the water in fork to puppy lift, towards the latter part of the month the plungers of steam engine again commenced thumping and water in mine to rise. Preparatory to stopping for repairs of adit level, all joints of pumps forming column of jack head lift that were old were broken and newly made, so that all the joints now are nearly made and perfectly tight. By means of some timber put in and a screw we can at any time make a joint in column of jack head lift in twenty minutes stoppage; this is quick work in an underlie shaft and suspended lift. New machinery: Lobby completed, ground excavated, and bottom paved. The erection is being pushed on as vigorously as possible.—Adit level: A great deal of imperative repairs had to be made here in renewing the timberwork, the necessary timber raised the cost very much, this article being a heavy charge in the month's cost.—Bryant's Viaduct: Put across gulley and road, and nearly completed. Level in good order; stuff cleared and road laid to near the rise to the surface, this has been a long time in hand, this being prosecuted only when force is available and other important points are fully manned, such as machinery, erection of new machinery, repairs to adit level, &c., so that it shall not be stated that explorations are carried on to the detriment of more important works. Explorations: Results from this during the past month have been very meagre, owing to the mass of overburden to be removed, and no approximate stowage room, compelling us to carry it down, which, though containing gold, yet is too poor to be remunerative. The lode and its aspects continue fair, and when rise is available to tram away debris much better results may be anticipated, this will shortly be the case.—Reduction: New launders made and fixed to convey water from washhouse to stamps, stamps pitched. The roughs treated in stamps last month gave 120 oitavas, cost of extraction being about Rs. 154, including baize for bed. A good deal of temporary repairs made to launders across gulley, &c., and in taking up water in gulley, but this has to be done whether we get gold from explorations or not.—Saw Mill: Fully employed in sawing sundry scantling timber for mining purposes, plank, &c.

— Feb. 5: Drainage: During the last few days the engine worked the plunger gave a little trouble, the valves thumping, and the water in the mine rose to the cistern, and one valve broke, which caused us to stop the machinery an hour earlier than we intended, but which is, however, no detriment to the works in the mine. The bucket changed twice, valves in good order, joints all tight, so that no danger to the lift is anticipated by the water rising.—Adit Level: As previously advised by me, the timberwork at and adjoining No. 1 shoot pass is in a very rotten and dangerous state, and even if temporarily spurred will have to be done, if not at once very shortly, and to effect the repairs the engine must stop, as the legs are close to the rods; some of the legs were cut and trimmed for rods to work, and such being the case it is thought advisable to make it secure at once, so that when new machinery is put to work no prolonged stoppage may be made to impede progress, as great faith is evinced in the success of the new plunger to the engine. The men on the contract are three following corps, and one by day putting in timber and preparing the same; price offered 32*l.* for the job. Four Englishmen, each allowed three assistants, and 10*s.* each if completed within 12 days. One of the shaftmen refused to enter it as the price was too small, so I put another in his place. The premium is offered as time is money, and the quicker it is done and engine put to work the better.—Bryant's Level and Viaduct: This has been in abeyance, and operated on when force is available. The erection of new machinery and works in the adit level, &c., being the points not allowed to stop by any means, having precedence of all other points.—Explorations: During the past month a great quantity of overburden has fallen by the continual rain, which had to be removed, and not having any stowage room was sent to the wash-house; this very much depreciated the value of the ore, debris being at least two-thirds of the total treated. A great deal of this inconvenience will be remedied on clearing the shoot pass and tramming through Bryant's. The branches when uncovered are sustaining their usual favourable aspects, the number of squats or bunches of rich ore have not been so numerous latterly as heretofore, but less intact (semi) ground has been dealt with the last month than in the previous ones.—Reduction: Pitched stamps, cleaned coffers, &c., and sand from the same good.

— Feb. 10: Adit Level: Good progress being made in repairs of timberwork in level at and near No. 1 shoot pass; 14 sets put in, and back and sides nearly lathed.—Bryant's Level: Cleared off debris to rise, and, rise now being cleared, which I hope will be accomplished by Tuesday next, when we shall be able to classify the ore better, and not cart it so heavily charged with debris.—Explorations: Samples and ore treated to date of better quality than that of last month. Lode continues of good size and moderate quality.—Reduction: Stamps working nine heads, stamping tailings caught in catch-pits in wash-house and the roughs on the gratings at head of strakes, and though the result may not be quite so good as that stamped last month, I hope it will prove very satisfactory. All the launders and stands, excepting those lately renewed, are very rotten and must be renewed, if not for treating ore from explorations, for treating that anticipated from bottom of mine where available; these will be renewed as convenience and force permits.—New Machinery: Masonry on bottom wood bed built 2 ft. high, and bolt holes bored in the stone as per bed castings on the spot.

JAVALI.—G. E. Chambers, Feb. 5: I have read with much interest the Admiralty regulations as regards boilers, and I will carry out some of them with our boiler next wet season. The following I beg to hand you as a report of the past months' working.—Mine: The No. 1 level over Pim's tunnel was only driven 1 vara, the ground being exceedingly hard; I am now driving half in the country and half on the lode, and think that thus we shall make better progress. The shallow level between San Pedrito and Laken shaft was driven 9 varas, yielding very good quartz; when we are about 25 varas further I intend to commence storing. The shallow level on south lode, under Socorro, was driven 22⅔ varas, ground also of a fair quality; I shall soon be able to commence stoping here; the shaft for filling was also made last month. From the various stopes, interior and surface, 670 cubic varas of quartz were extracted, and from the manto workings 371 cubic varas. On the south side of Socorro I have made a new discovery of manto, consisting of some thousands of cars; I have also discovered that the Concepcion lode runs parallel with the Esperanza lode at a distance of 200 varas. I have made one or two small cisterns, and found the quartz very good, and I now propose to continue the manto tramway at Esperanza and cut the Concepcion lode at the same level, and work the quartz with the square stamps; in fact, 30 yards of cutting were completed last month. Although the stuff brought to mill came from the usual places of washing, the general average yield was some 5 grs. below that of the past month.

Mill and Remittance: Up to the 21st there was water sufficient for all 30 stamps, but since then the weather has turned very dry, and I am obliged to put on the engine, there only being water for 15 stamps at a slow speed. On an average last month 29 stamps worked 14 days, crushing 2280 tons of quartz, which yielded 437½ ozs. of gold, making an average value of 4 dwts. ¼ gr. per ton. The total remittance consists of 522¾ ozs., including the result of Esperanza mill. With the exception of the general repairs which I intend to make when working with only 25 stamps, the whole mill is in good order, and with the aid of steam and water I hope to keep the 30 stamps going all through February.

Esperanza Hill: The shoes you sent by November mail only arrived here on the 30th of January, and then only by great pushing and paying an extra price. Fortunately we kept the stamps going with wooden shoes, which gave us immense trouble, continually requiring to be renewed, but still were able to grind a fair quantity of quartz. On the 18th the new four stamps were ready for working, with the exception of the want of shoes; and finding that they did not come I also had some wooden ones made and set the battery to work, but as I said above with continued stoppages, so that on the whole I can only calculate that the stamps worked 24 days, and crushed 240 tons of quartz, which yielded 85½ ozs. of gold making an average of 7 dwts. 3 grs. I of course picked the quartz to the best of my ability, both as regards quality and hardness; but taking into consideration the weight of the wooden shoes and other difficulties this is a splendid result. Now all eight stamps are at work; the new battery with the three discharges is a complete success. What we greatly feel the want of is a crusher, but as I previously said I wish to do all I possibly can to spare the company expense, and if one can be made here I shall immediately have it commenced. From the Esperanza Mine 134 varas of quartz were taken and 12 cubic varas of manto. I also removed 666 cars of dead ground to make a place for depositing the quartz during the dry month.—Receipts and Expenditure: The boxes of coin were safely received. The expenditure was 1092*l.* 1*s.* 3*d.* The expenses this time were high, chiefly owing to some heavy accounts for freights and storage, and also to the men having worked exceedingly well the whole of the month. The remittance is valued at 1350*l.* Although the present month of February is considerably shorter than others I still hope to be able to send you a satisfactory remittance next mail.

CANADIAN COPPER AND SULPHUR.—F. Bennetts, March 2: The mines continue much as they were when last reported, with the exception that in the 15 fm. level, east of No. 5 shaft, we find that the vein in the back, of about 5 ft. wide, contains at least 3 ft. of very rich ores, and should this continue we shall have a very material addition to our reserves. The smelting-works are running satisfactorily.

COLOMBIAN HYDRAULIC.—E. S. Jones, Jan. 29: No. 80 Run: After various delays securing dangerous places at the ditch to prevent accidents we cleared upon the 27th inst., and obtained 139 ozs. of amalgam, valued at $1054·80, part from the ground sluice. This result is not so satisfactory as anticipated, owing partly to the gold remaining at the bottom of the ground sluice, which will be collected during next week by the working of the ground to extend the sluices as far as can be done in 12 days, which is the time I have devoted to do this work. I have made a contract with several of the men to blast 5 fathoms of granite rock that has to be taken away, and they agreed to work day and night until it was completed. The gravel in the northern part of our present face has improved, and as we have now fairly started on better gravel I have decided not to advance, leaving the sluices so far behind.

SIERRA BUTTES GOLD.—Result of the working at the Sierra Buttes and Plumas Eureka Mines for February: Sierra Buttes Mine: Total receipts, $24,372; total working expenses, $17,933.—Plumas Eureka Mine: Total receipts, $28,582; total working expenses, $18,310. The Plumas Eureka clean up for January was as follows:—Total receipts, $35,173; total working expenses, $18,909.

ENGLISH-AUSTRALIAN GOLD.—Mr. Mark Pollard writes (Fryerstown, Jan. 31): 360 ft. Level: The quartz is improving in the western wall, and making a little more stone on the footwall; the men who are working here have only been working in the drive one week since my last report. The bob on the eastern shaft broke in two, and I kept up the men to assist in taking out the old one and to put in new bed logs for the new bob. We have got new timber from the mills, which is 16 by 14; the old one was only 12 by 12. Shall commence to pump again in two or three days if all goes well.—190 ft. Level: The ground in this drive is a little better, but still in sandstone; there is a little water in the face. I have not measured any ground in the mine for the fortnight, being so much engaged about the new bob. I think we shall be able to make better progress with the drive now, as the ground is not so hard.—140 ft. Level: The quartz in this drive is making larger on the western side of the drive; the drive is 3½ ft. thick, and from east to west is about 12 ft.; see a little gold in breaking from the western face, but very fine, and in hard stone. I have still a body of stone, driving south on the eastern side of the 280, from No. 2 rise; we have also commenced to drive 150 ft. level; there is more quartz making in this drive; have met with a flookan underlaying to the west, and the quartz is making on the flookan or wall. There is every indication of this making a large body of stone. The stopes at the back of this level are looking very poor for quartz just now, but I think we shall have more quartz by rising, as there is stone showing in the rise, which I have up 5 ft. above the present backs. They are all flat leaders, one above the other. The stopes at the 180 ft. level north and south of the cross-drive are getting smaller; have about three or four months work more in those stopes to work them out; the 210 ft. is looking just the same; ground still very hard. The quartz all through your mine at the present time in sight. I think it very poor; 480 tons of stone have passed through your battery for the last 14½ days.

BRATSBERG COPPER.—J. Daw, A. W. Daw, March 8: In the 25, driving west of Murchison's shaft, the lode is 2½ ft. wide, worth 18*l.* per fathom. In the 25, east of the aforesaid shaft, the lode is 2 ft. wide, worth 9*l.* per fathom. A winze sinking to the east will be communicated in the course of two months, the lode being 2½ ft. wide, worth 12*l.* per fathom. A stope in the back of the 25 west is worth 12*l.* per fathom. The three stopes to the east of York's shaft will yield 12*l.* worth of copper ore each per fathom. The three stopes to the west will yield 14*l.* worth of ore to the fathom. In No. 3 adit the lode is 3½ ft. wide, composed of quartz and rich copper ore, worth 20*l.* per fathom. In a rise in the back of this level the lode is 3 ft. wide, worth 15*l.* per fathom. The three stopes to the east will yield 12*l.* worth of ore per fathom. The four stopes to the west are not looking quite so good, worth 9*l.* per fathom. No. 2 adit has been very rich for a short time; the lode is now 2½ ft. wide, worth 20*l.* per fathom; this end as well as No. 3 is opening up very productive ground. In a rise in the back of this level, which is going up in whole ground, and is full 65 fathoms from this level to surface, the lode is 2½ ft. wide, worth 20*l.* per fathom. A stope to the east is worth 12*l.* per fathom. The stope to the west is worth 15*l.* per fathom. Having holed the winze to No. 3 adit we are stoping to the east and west of the same on a very good lode, worth 18*l.* per fathom. The cross-cut being now holed to Hoffnung lode it has well ventilated Johannes beside Hoffnung; this work cost the old company 3000*l.*, for which the present company will have the benefit at a cost of 100*l.* We have now started to drive on Johannes in a lode worth 12*l.* per fathom, and are stoping in the back in a lode of the same value; this the old company could not work for want of air. We have now about 500*l.* worth of copper ore on the dressing-floors, taking copper at its present prices. We hope by the end of next month to begin sending ore to the shipping port—that is, if the steamers begin to run on the lakes. Had the company possessed a steamer of their own the ore would have been sent earlier; by not having a steamer we are working under a great disadvantage. We feel quite sure the steamer would pay its way by bringing back passengers and goods. We should get the ore out the Bandags Lake for nothing. The cost of the steamer would not exceed 2000*l.* We hope by the end of May or early in June to be sending the first cargo of 200 tons. I received 13*l.* 3*s.* and 12*l.* 11*s.* per ton for the bulk of the last two cargoes. All our surface operations for the new machinery are progressing as fast as the nature of the work will admit. We have been favoured with a very mild winter.

TOCOPILLA COPPER MINING AND SMELTING.—Captain Tredinnick, Feb. 2: Carmelita Mine: In No. 14 east the end has been driving by three men, at 8·0 per metre; 9 metres were driven during last month, which produced about 10 quintals of ore per metre; ley 14 per cent. We expect to have an improvement here soon, a good lode having gone down in the bottom of No. 13. In No. 13 east the winze is sunk 8 metres, which produced 220 quintals of ore, worth 14 per cent., now sinking at $10 per metre. The air being so bad we have had to make an air machine for this winze. The men are now working very satisfactorily, and we hope to communicate to the 14th level in five or six weeks. There are three tribute pitches working in back of this level, and one west. Men earning good wages. In No. 12 east the end is driving by two men, at 10*s.* per metre; 10 metres were driven last month through a poor and hard bar of ground. By the run of Lean's shoot of ore from the upper levels it will take us about five or seven weeks to reach this point, when we expect good results will follow. The winze is being sunk in bottom of this level for ventilation. The lode contains a little ore. There are three tribute piches working by six men, producing good ore, and the men are earning fair wages. The west end is suspended for a time, the men being employed to sink a winze for ventilation. Two tribute piches are being worked by four men, yielding a fair quantity of ore. No. 11 east is suspended for the moment to sink a winze for a short pass to discharge stuff to No. 12, where there is a good railroad, trip-plat, &c. Last month three men sunk 7 metres 50 centimetres, now being sunk at $12 per metre. The west end is driving by two men, at $9 per metre; 10 metres driven during last month produced a little ore of low quality. There are two pitches working in back of this level by four men, earning fair wages. In No. 12 east a winze is being sunk for ventilation, by two men. The air in the bottom levels is very bad indeed, having changed greatly since the writer first entered the mine, in October, 1880. The timber decays very quickly, and is very expensive to replace. For some time past it has, and will require a timberman for each of the lower levels of this men. We find that in the two lower levels the bottom rises 15 in. for every three months, therefore a 7 ft. level after two months is only about 5 ft. 6 in. No. 9 level is communicated to the old mine, so we purpose sinking winzes from this level to No. 14, when we expect to establish good ventilation, and trust this will also preserve the timber. While we are sinking the winzes referred to we cannot drive the eastern levels as fast as we should wish, but hope to communicate these winzes in about three months. We must then push on our eastern levels, so as to get into the rich shoots of ore spoken of by Mr. Jose in the old or eastern part of the mine. We are further pleased to inform you that the double skip-road in Jose's shaft is completed to the 150 metre level, also the new shaft tackle, with two 8-ft. sheaves for wire-rope, &c. A good railroad has also been laid down from the shaft to tram the stuff, with an iron wagon. The men will commence immediately to cut down this shaft below the 150 metre level. We have set two tribute pitches in this part of the mine to four men, and expect as we clear and secure the shaft other tributers will commence working.

Percance Mine.—South Lode: In the past month we have repaired the 120 lift or shaft, and also made the sundry repairs at this level. We have also cut a plat at the 120 west of shaft, sunk fork to serve as a deposit for daily water coming out of the new lift now sinking. Six men are now sinking this shaft below the said level at $15 per metre; lode 4 ft. wide and producing good stones of ore. The 100 level east has been driven by three men at $10 per metre; lode small and unproductive, with spots of ore; we think it best to suspend this level for the present. The 80 level is being driven by 3 men at $9 per metre; lode 2½ ft. wide, yielding ore in small quantities. Some other bargains that were in progress are stopped. We purpose setting all ground that will pay to work on tribute when an opportunity offers itself, as the lode in the upper level will not pay to stope or to work on house account, which has been the custom here. This mine is in a beautiful channel of ground, and should expect good results in sinking.

Santa Elena Mine.—Here we have stopped driving and sinking the winze for the present, until we get it dialled. There are other lodes in this mountain. The former lode, although driven for a great length, has always been poor. The men are now employed in the back of the lode working on tribute, price 10*c.* for ley of 10 per cent., and scale 10 c. on the rise, tributers pay all costs.

Deseada Mine.—We have commenced to clear the run in the adit level or tunnel, which is 33 metres or about, by two English miners, with a contract to clear the same for $170, and two native labourers at day pay. At this mine we have two pares of tributers returning some good coloured ores for our furnaces. We expect to have a good many more tributers working in this mine shortly, ae by the clearing of the above-mentioned tunnel they will be able to bring the ores to surface with every facility, whereas now they are brought up on the backs of natives in bags with very great difficulty.

KAPANGA.—J. Thomas, Jan. 23: The underground operations done the past four weeks ending Feb. 4 are as follows:—The old lode at the 70 has been driven on north 12 ft., the end being now 38 ft. north of the new caunter branch. The lode varies in size from 2 to 3 ft., and is at present about 18 in. wide, of the true description of quartz and minerals for meeting gold at any moment—the underlie and hanging-wall with the usual tough flucan seam, containing fine black mundic, continue exceedingly regular, and bearing every good indication that we had in the levels above. As yet we have not seen any gold north of the new caunter branch. At the point of intersecting the old lode by the caunter, a distance of 18 ft. north of the cross-cut, we commenced a rise on their junctions. To this date the rise is up 30 ft., and we find the lode and caunter to continue very regular; the caunter underlies with the lode, having a strike or dip southerly, the same as the runs of gold-bearing ground proved in the upper levels. The caunter varies from 6 to 10 in. wide of the best description of quartz, at times yielding strong spots and coarse leaf gold embedded in the stone, which is full of metallic antimony and mundic, the arsenic being a sure forerunner of gold. The indications are all that can be desired, and it is on these junctions and intersections, as a universal rule, the rich runs of gold are found in the mines of this country. These two points of operation at this level being for the moment looking the most important, I have kept the men developing them during the month. Next month I will divide the hands, and open on the lode south of the caunter as well as north and rising. Scotty's lode at the 50 lode south of the caunter as well as north and rising. Scotty's lode at the 50 has been further driven on the north 10 ft. distance, now driven from cross-cut 73 ft. The lode is 12 to 13 in. wide, composed of a kindly, soft, sugary quartz and soft flucan, very much intermixed with strong mundic. At this point the horse of killas mentioned last month has not quite disappeared from the end. Its effect has caused the lode to make a bend of an oval-like form. On the south point of horse, where a soft flucan lode seems to cut off the horse, the side bears north-east and south-west, running obliquely to the lode, underlying with it westerly, and having a dip southerly. At the point of contact of silde and lode occasional rich small veins of gold quartz are met with, the quartz being of a most promising character. In the 10 ft. driven north of the lode no gold has yet been seen, although the indications in this end are also exceedingly good. Finding a little gold making at the point of the silde, which is 63 ft. north of the cross-cut, I commenced a rise here, too, and am pleased to say every time the lode has been broken down we see a little gold and get a few specimens. This rise is up 20 ft. Nothing rich is yet in sight at either of the points of

operation, but both are yielding a little gold. What we get is very rich. The prospects and indications generally cannot be better, and we may expect any day to come on a run of gold with the splendid chances that are developing. Until the rises are put up 50 or 60 ft. to open out the ground for stoping the quantity of quartz obtainable for crushing will be limited. In the meantime all the ladestuff is carefully saved, there being some 5 tons on hand, with 8 or 10 lbs. of quartz showing gold, which I do not class as specimens. The machinery and pitwork continue in the best of order, and all departments are being pushed ahead with all possible speed.

DINGLEY DELL ESTATE AND GOLD MINING.—Feb. 17: Your letter of Jan. 20 has arrived. Since writing you last we have taken the pulveriser to pieces, and changed all the internal parts of the machine for new, the old parts being entirely worn out. I have also been retorting all the mercury, which was very impure; this has taken us four days to do, on account of the retorts being so small. I shall now put it through a regular process of refining before it will be fit to go on the tables: this will be got ready as early as possible. I fear there are some natural combinations in the quartz, which will make it very difficult to manipulate without the aid of some other agency, hence we have some idea of burning a few tons before putting it through the pulveriser; it will assist us twofold. First free the gold, and secondly make it considerably easier for crushing. I have been informed by Mr. Ryan that at the Alpha Gold Mine, when worked by the former company, they had to resort to the burning system; however, we hope to be able to ascertain this without much trouble or delay. We are developing and prospecting the property with unabated energy, and at No. 3 we are blasting it down in several places all along the line of the reef, and it is much of a sameness everywhere; I shall continue to blast it out until we reach the underlying wall, which will give us some idea of what it is composed of throughout. I have finished the clearing, and commenced to sink No. 1 deeper. We have quartz all the width of the shaft, but how much wider it is I cannot say. After we get down about 50 ft. I should like to tunnel across it to see how large it is. We have suspended No. 4 reef for the present. The tunnel driving to the east is in about 12 ft.: I have not intersected any quartz, therefore I have come to the conclusion this is a superficial reef only, although we have an abundant supply of quartz on the surface. We are driving and sinking on the ledge of rock to the north of Bungalow, but as yet there is no material alteration: I have got out here about 6 tons of very fair-looking quartz. The jungle and debris are being rapidly cleared away at Fletcher's application, and shall commence shortly to expose it.

TAMBRACHERRY ESTATES AND WYNAAD GOLD.—Cootacoril: Mr. Harvey reports by this mail:—The upper level is still looking very well; the north end has improved, being now 4 ft. thick. Yesterday I obtained a capital show of gold from the south end by hand-crushing and washing, and a fair show of gold by same process from north end. The reef has now been opened on this level about 110 ft. in length.—Middle Cross-cut: Driving on this is much easier, and more favourable for a continuation of the reef. The s.s. Nicosian, with the last of the machinery, had arrived at Calicut.

TAMBRACHERRY.—The crop of coffee turns out 200 tons, or 20 tons above the estimate, and a further large quantity of cinchona is being planted.—Continuation of Cootacovil Reef: The reef, now it is opened out for some distance, is found to lie in a somewhat different direction, and the previous attempts to cross-cut it have been futile. Instructions have now been given to follow it south, and forest will be felled in a line to admit of further explorations. This will necessarily be a work of some time.—Charlotte Reef: The mine captain reports:—On account of a large influx of water, we are obliged to suspend operations. We continue to drive on the south branch.

ORGANOS GOLD.—J. G. Green, Jan. 20: Constancia, Roger's Level: Driving by two men, at $15 per fathom; it has been extended 4 fms. 5 ft. during the month, making a total of 13 fms. 4 ft. from the mouth; the level being driven in a south-westerly direction, it will intersect the lode obliquely. Branches of great promise have been met with, and the character of the rock altogether is of a very favourable description; I hope to cut the vein in a few fathoms further driving. Buenaventura level has been worked by two men, at $18 per fathom, and has been extended 3 fms. 4 ft. during the month, making a total of 23 fms. 4 ft. from the mouth. Some very rich specimens of quartz have been extracted, but their remains some fathoms yet to clear before the forebreast is reached, and where the vein is reported to be very rich. Esperanza level has been worked by two men, at $16 per fathom, and extended 5 fms. 1 ft. during the month, making a total of 27 fms. 1 ft. cleared and driven since the commencement of operations. The lode has been variable in size, but has continued rich, and some extraordinarily rich pieces of gossan have been taken out giving such results as 91½ and 544 ozs. per ton. The character of the country remains unaltered.—Te Encontre Mine: No. 1 adit has been carried on by two men, and since the commencement of the present year by three men, and the adit is now cleared and secured 7 fms. 0 ft. 6 in. from the mouth. The lode has been at times very wide; a fortnight ago Mr. Mills measured it at 8 ft. wide; the whole of the stuff gave good results on washing in the batia. At present the lode is disturbed by a horse of killas, and poor, but there is no doubt it will improve again as we advance. No. 2 adit cross-cut, mentioned in my report No. 6, has also been commenced lately, and will intersect the lode at a point some 12 fms. deeper than No. 1.—Surface Operations: We have had to continue the repairs to the road between the mines and Aipe, in some places, indeed, it has to be made anew, and in consequence of a lot of labour which could have been employed very advantageously at the mine has had to be sent to carry out this work. Since my return from Honda good progress has been made with foundations for machinery, preparing timber, &c., and I hope in my next to be able to inform you that at last we have succeeded in bringing up some of the heavier pieces of machinery.

DEVALA-MOYAR AND RHODES REEF GOLD.—Extract from the report of the mining manager, dated Feb. 13: Rhodes Reef Mill has been started. The machinery works very smoothly, and has been strongly and substantially erected, and will, I judge, crush about 300 tons per week. We shall be obliged to run a few days without the buddles, as we are two pullies short yet. We have the way bills for same. They left Madras on the 11th inst. Expect them daily.—At Rhodes Reef we have had 35 men raising, satisfactory progress being made. Quartz looking well. The tunnel we are driving to strike the reef further up the hill on Rhodes Reef has been driven 10 ft. during the week, making 52 ft. in all (contract). I expect to strike the reef in 40 ft. more.—Reef Below Rhodes Reef Mill: The tunnel has been driven 38 ft. in the past fortnight; did not measure it last week, making a total distance on the line of reef 54 ft.—Harewood Reef: The contractors had not squared up the face properly, so I would not measure this.—Salomon's Reef: The main tunnel has been driven 2 ft. in the week: total length driven, 158 ft. The raise-up has risen 7 ft., making a total distance of 109 ft. The ground in the raise-up is getting softer, and I hope soon to strike the old native workings above. Then we can put 10 men on raising quartz. The upper tunnel has been driven 1½ ft., making 26 ft.; all contract work.—Strathearn Reef: The lower tunnel has been driven 9 ft. during the week; still in reef. We have now driven over 20 ft. into (across) this reef, and there are no signs of getting through it. Quartz looking well. We are still continuing the cut on the surface, and are in 60 ft. and not through the reef yet. We see good gold in the stone and in the fine dirt.—Empress Reef (Kintall): Work going on satisfactorily.

NUNDYDROOG.—Capt. B. D. Plummer, Feb. 20: Mining: We are pushing on operations as fast as we possibly can. The following work engages our present attention.—Maharajah Reef: In sinking the engine-shaft the rock is exceedingly hard and spare for working. In sinking the air-shaft the rock here is also spare to cut. In sinking the new engine-shaft to the north the ground is not bad to cut, and the coolies are making wages.—Eastern Reef: I have started a cross-cut to the west, in the 70 ft. level, north of McTaggart's shaft. The cross-cut east of this level has been driven 14 ft., and a little more water is percolating from the forebreast. The drift north of McTaggart's engine-shaft has been driven 39 ft.; 13 ft. remain to be driven to hole into the drawing shaft. Taking into consideration the nature of the work, the progress made may be considered as satisfactory. It affords me pleasure to be able to say that all surface work progresses to my satisfaction. The stamps, roads, buildings, and other erections progress well.

APOLOGY.

R. HUDSON'S STEEL TRAM AND TIPPING TRUCKS.—We, the undersigned, herewith express our REGRET for having MANUFACTURED TIPPING TRUCKS, inadvertently infringing the patent rights of Mr. ROBERT HUDSON, Engineer and Ironfounder, of the Gildersome Foundry, near Leeds, and beg to thank him for having stayed further proceedings against us in consequence thereof.

YEADON AND CO., ENGINEERS, LEEDS.

Feb. 27, 1882.

NOTICE

THE UNDERSIGNED, Proprietor and Concessionary of Mining Rights on the Farms Ponieskrantz, Ludovine, Waterhoutboom, Grootfontein, Belvelere, and Driekop, situated in the district of Lydenburg, South African Republic, hereby notifies to all whom it may concern, that HE WILL NOT IN ANY WAY ACKNOWLEDGE ANY MINING RIGHTS whatsoever to the said Farms, or any portion thereof which have been acquired by purchase, concession, or otherwise since the 7th day of November, 1881.

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SOCIETE ANONYME DE LA NOUVELLE MONTAGNE, BELGIQUE.

Les actionnaires sont informés:—

1.—Que l'Assemblée Générale Ordinaire est fixée an 3 Avril prochain à 12½ heures à Engis (Hotel Taulere).

2.—Qu'elle sera suive d'une Assemblée Générale Extraordinaire à 2 heures dont l'ordre du jour est fixé comme suit.

(A).—Révision des Statuts, dans le but de les soumettre aux prescriptions de la loi du 18 Mai, 1873, sur les Sociétés Anonymes.

(B).—Eventuellement autorisation de faire apport des Usines de Prayon dans une Société Anonyme à constituer. Les actionnaires sont instamment priés de déposer leurs actions chez MM. C. DEVAUX et Cie., à Londres, avant cette époque

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Mining Correspondence.

BRITISH MINES.

ASSHETON UNITED.—Joseph Garland, March 15: The 40 fm. level west is opening out a large and strong lode, being over 6 ft. wide, including a horse of killas between the two branches of lead ore, and yielding about 2 tons of ore to the fathom. The 70 fathom level west has fluctuated during the last fortnight, generally producing less blende than previous to date of last report, but is now recovering its very promising appearance, and yielding saving work for blende, with a sprinkling of lead ore. The lode is 5 ft. wide, and a little water percolates through it. We have commenced driving west on a shoot of ore a little above the back of the 30; the lode is 18 in. wide, and will yield 1¼ ton per fathom. The pitch west of Hunt's cross-cut, in the back of the 60 west, has been re-set to four men, at 4l. per ton of lead ore. The other pitches are without change. We sampled last Wednesday 30 tons of lead ore for sale to-morrow.

BEDFORD UNITED.—H. Trezise, March 15: North Lode: The 115 east is worth 6l. per fathom; the lode in the present end is 1½ ft. wide. We have 14 tributers working in this part of the mine, at an average tribute of 13s. 4d. in 1l.—McCallan's Shaft: Bridge Lode: The shaft is sunk 4½ fms. below the 30; the lode in the shaft is 2 ft. wide, composed of gossan, mundic, and copper—a promising looking lode. The ground continues good, and the shaftmen are making good progress in sinking. The lode in the 30 west is 4 ft. wide, composed of capel, mundic, and copper. The 30 east is looking well; a very fine lode, 4½ ft. wide, and worth 20l. per fathom; I think we may fairly expect a good piece of ore ground east of shaft. The lode in the 20 west is 3 ft. wide, mixed with iron, gossan, mundic, and copper. The lode in the 20 east is 3 ft. wide, composed of gossan, mundic, and copper, from which water is running freely. The rise in the back of this level continues to yield stones of ore. The western or air shaft is within 6 fms. of the 20. We calculate to sample 80 tons of ore next sampling. We have already sold 20 tons mundic at 1l. per ton. I consider the present state and future prospects of the mine most encouraging. I am quite satisfied we have in the Bridge lode alone a good and lasting property, which will amply repay the shareholders for their outlay.

BEUNO CONSOLS.—J. Woolcock, March 15: We have got through the run of troublesome ground in the cross-cut, and found some good stones of lead ore by the footwall. During the past week we have been sinking in the sole of the level, and find the ore still going down, which speaks well for the further development of this part of the mine in depth. At new shaft we have a splendid pile of ore broke from the north driving, which we shall cart to the floors at once, as we have now commenced dressing ore for market. No change worthy of note in engine-house level since my last as regards the production of ore. The men are making good progress in clearing out the adit, which I expect we shall complete in a week or so from this date, when we shall begin to bring the ore already broke to surface. We have a magnificent engine fixed in its place at the mine, and no time shall now be lost in fixing the necessary pitwork and headgear.

BLUE HILLS.—S. Bennetts, R. Harris, March 11: The Pink lode in the 80 east continues to produce low quality tinstuff. The north lode in the Blue Burrow shaft, sinking below the 40, is about 1 ft. wide, and producing some good stones of tin. The 40 east is poor. The 30 east is worth 10l. per fathom.

BWLCH UNITED.—W. Northey, March 15: In the 50 east the lode is about 2 ft. wide, composed of blue killas, quartz, carbonate of lime, patches of sulphur, with occasional spots of lead ore, and letting out more water than for some time past. In the 12 east the lode is from 2 to 2½ ft. wide, intermixed with killas and quartz throughout. This point has a more favourable appearance at present for an early improvement. In the 12 west the lode is about 3 ft. wide, composed of killas, quartz, copper, and silver-lead ore, worth 1 ton per fm. This point looks very encouraging for opening out a new section of valuable stoping ground. In the new stope in back of the same I have placed a pare of men to cut hitches, fix stull, and prepare for stoping. I have also placed a pare of men to clear out the leadstuff and take up the water in the bottom of the 40 to prepare for stoping.—Marvin's Lode: In the stope in the bottom of the adit the lode will produce fully 17 cwts. of lead ore per fm. In the stope in the back of the 15 west the lode is of a kindly appearance, and will produce 15 twts. of silver-lead ore per fathom. In the cross-cut south in the 40, near Durram shaft, I have had a few holes blastad on the north side, and find the lode has taken a more northerly direction. At or near the fault the lode is unproductive. I should advise you to suspend further operations at this point for the time. Good progress has been made for the past week in draining the mine to the 100; and as soon as the water is drained and pitwork put in good repair I shall then begin to drive the cross-cut north to intersect the main or Goginan lode, which has proved so productive in upper sections of the mine. All the machinery is in good order, and working well. Drawing and dressing going on as usual.

CARNARVON COPPER.—J. Roberts, W. Darby, March 14: In the sump at the sole of the 90 the lode continues to maintain its value, worth 4 tons of ore per fathom. In the rise in the back of the 90 there is nothing new since reported last week. We have opened sufficient room between the 80 and 90 east, and I have commenced stoping east of winze, and the lode is worth, at present, about 1 ton of ore per fathom. The cross-cut at the 70 (Garmon's) is looking a little better to-day, and the leader of ore seems to be widening. In the cross-cut at the 46 (Cae-y-groes) there is no change to notice since reported last week.

CARNARVONSHIRE GREAT CONSOLS.—W. H. Borlase, March 16: Endean's engine-shaft is almost complete to the required depth, and I hope to commence cutting the tip-plat sometime next week. In cross-cutting to the hanging-wall of the lode in the 14, east of Endean's shaft, we found nothing worthy of note, and have resumed the end. The lode is divided at present by a horse of killas; should the parts unite again (I have no doubt they will) we may look forward for a great improvement in this end, particularly so as I have started to sink a winze in the bottom of the adit, about 15 fms. in advance of this end, in a lode worth for length of winze, 9 ft., 2 tons of lead ore per fathom, and the lode seems to improve as we go down. Nos. 2 and 3 stopes in the back of the 14 east, are worth respectively 20 cwts. of lead per fathom. The stope in the back of the 14, west of Endean's shaft, and east of the diagonal shaft, is improving; lode now worth 20 cwts. of lead per fathom, and a stope west of diagonal shaft is worth 2 tons of ore per fathom. I would here remark it will take us about three week to get everything in this part of the mine in good working order, after which with vigorous working we shall have a good mine. We have communicated the rise from No. 3 stope in the back of the adit with the 10 fm. level above adit, and have started to stope each end of the rise. Eastern stope worth 30 cwts. of lead per fathom, western stope 10 cwts. of lead per fathom. The men in No. 2 stope in back of the adit are rising in a lode, worth 25 cwts. of lead per fathom. No. 5 stope is the same as last reported, worth 15 cwts. of lead per fathom. On the whole, I think our prospects are improving. We sent off on Tuesday the ore purchased by Mr. A. Eyton on the 8th inst. Machinery now working well, and weather very fine.

CLOGAU.—W. A. de la B. Ramsay, March 10: Extract from manager's letters: We cut very good gold every day up to and including Wednesday. There has not been any in sight since, but the indications are good. We have not yet got room to cut much ground towards the west—i.e., in the direction of the run of the shoot. I have about 45 lbs. first-class, 300 lbs. second-class, and about 300 or 400 lbs. of fine stuff. I hope to get nearly 5 lbs. of gold.

— March 14: I am glad to say we are still cutting gold, but not in any great quantity, but the ground was improving a little. I have had to stop work in the sinking, as the footwall is very shakery, and we are not deep enough down to allow of timbering yet. I hope to get about 60 ozs. of gold with the stuff we now have; I begin on it to-morrow.

CROOK BURN.—Jacob Craig, March 9: There is no change calling for remark in the ends of cross-cuts since my last. Our progress in driving is about similar to what it has been for some weeks, with the exception of the north end, which is harder.

CYM DWYFOR (Brynarian Mine).—Jno. Davies, March 15: So far as we have driven on Joseph's lode since my last report the ground gets firmer and the lode improves.

D'ERESBY MOUNTAIN.—J. Roberts, W. Sandoe, March 15: The stope and rise at No. 6 have rather improved in value since last week. Although we have seen richer lodes, yet we have never seen a lode having a prettier appearance than this has; worth from 2 to 3 tons of lead to the fathom. The No. 5 south is of very much the same character as we have been reporting for some weeks; worth 5 tons to the fathom. We have commenced sinking close in the forebreast to get a communication to the rise at No. 6, and we hope to get through early next week. The north end at No. 5 is letting out more water than it has been doing, and is worth for lead from 10 cwt. to 15 cwt. per fathom.

DERWENT.—John Morpeth, March 16: The 95 (middle vein), east of Jeffries' shaft, is still easier to explore; now let at 8l. 15s. per cubic fathom; the vein is 7 ft. wide, and worth 20 cwts. ore per cubic fathom. The flats eastward are yielding 1¼ ton ore per cubic fathom, and northwards 1½ ton ore per cubic fathom. A third party are engaged upon the flats some fathoms further west of the above, where the yield is 28 cwts. ore per cubic fathom. These flats are all harder, now costing all through 7l. 10s. per fathom. In the back of the 95 we have two stopes; No. 1 is 5 ft. wide, and yields 16 cwts. ore per fathom; and No. 2 is of similar width, and worth 16 cwts.—Westgarth's Shaft, Middle Vein: We are working two stopes over the 93 east of shaft; width of vein 3 ft.; respective value 14 and 12 cwts. ore per fathom. The repairs in Westgarth's shaft are progressing fairly well.

DEVON FRIENDSHIP.—F. R. W. Daw, William Gill, March 16: We have just come up from underground, and we are pleased to inform you that the lode in the 30 end, west of Bennet's shaft is improving, and worth full 5 tons of arsenical mundic per fathom. We broke good stones of copper ore in the end this morning.—The rise in the back of this level: No alteration has taken place since our last report; the miners are making fair progress in rising. In the 30 east a change has taken place; since we last reported on this lode we have met with a leader of quartz and mundic on the north wall, which is letting out a stream of water—we believe from present indications we are almost through the hard bar of ground; the men are making better progress in driving. All other points in the mine are without change since our last report. In forking below the 30 fm. level we have met with timbers and stuff catched across the shaft, which prevents our giving you a full report on the 45. We hope to do so in our next report, for we are pushing on through with our shaftmen with all possible speed. All surface operations are progressing very satisfactorily.

DEVON GREAT CONSOLS.—I. Richards, March 16:—Wheal Emma, Inclined Shaft: In the 137 east, east of Friend's cross-cut, the lode continues of large size, 6 ft. wide, and very promising, being composed of capel, quartz, peach, mundic, and a little copper ore.—New Shaft, New South Lode: In the 115 fathom level east the lode is 2½ ft. wide, of a promising character and yielding small quantities of copper and mundic ores.—Railway Shaft: In the 205 fathom level west, on the south part of the lode, the lode is from 2 feet to 3 ft. wide, composed of capel, quartz, peach, and yields some good quality arsenical mundic and a little copper ore. In the 190 fm. level west, on the south part of the lode, the drivage has been continued by the side of the lode. In the 175 west, on the south part of the lode, the lode is 3 ft. wide, of a promising character, and continues to yield some copper and mundic ores of good quality. In the 160 west, on the south part of the lode, the lode—part carrying 5 ft. wide—is composed of very fine capel, quartz, peach, and some good quality copper, and yielded 4 tons of arsenical mundic per fathom—a very fine promising lode indeed.—Watson's: Very satisfactory progress is being made in cutting of plat at the 88. In the 88 west the lode is 1½ ft. wide, composed of capel, quartz, peach, mundic, and a little copper ore. In the western shaft sinking below the surface the lode is 2 ft. wide, composed of a very large portion of capel, with quartz mundic, and a little copper ore.

DEVON GREAT UNITED.—Isaac Richards, March 16: In Willesford's shaft sinking below the 104 the lode is 2 ft. wide, and continues to yield some good quality arsenical muudic, and a small quantity of copper ore. In the 60 west of Watson's shaft, on the Capel Tor lode, the lode is 2½ ft. wide, and composed of capel, quartz, peach, and some saving work of copper and mundic ores. In the 50 west of Watson's, on the Capel Tor lode, the lode is 2½ ft. wide, composed of capel, quartz, peach, mundic, and a little good quality copper ore. The cross-cut south at the 20, east of Willesford's shaft, having been communicated with a level driven west from the eastern part of the mine on the lode recently intersected, and finding that there will be a great many fathoms to drive to reach another lode at this level, it has been thought advisable to suspend this cross-cut and to place the men in the 60, west of Watson's shaft, on the middle or west Maria lode, and drive south in search of the lode, which at that point has been displaced by a cross branch or caunter lode, and which is supposed to be thrown in that direction. We are getting on with the driving gear and fixtures of air compressor for working the rock-drill machinery, and no time will be lost in getting the drills to work as quickly as possible.

DRAKE WALLS UNITED.—M. Bawden, March 16: The ground in the adit level driving west of cross-course, towards Mathew's shaft, is easier, and fair progress is being made by the aid of the rock-drills. In the adit level driving west of Mathew's shaft the ground is not so much crushed and broken, and we hope to continue this driving in a firmer strata than for some time past. In the adit level driving east of engine-shaft, towards Mathew's shaft, the south branches still maintain their size and value, and will lay open some valuable tribute ground. Every effort is being made to communicate the foregoing points, as until this is done we shall not be able to make a fair start to work these extensive mines with such economy as they should be worked. We expect, however, during the coming summer not only to complete this work, but to have the mines drained to the bottom or 100, and report speaks most favourably of the value and character of the lode we may expect to find in the bottom of the mine, which for many years have remained idle in consequence of the pitwork being inadequate to cope with the quantity of water coming down through the old workings from the surface; this in future will be conveyed to the river through the deep adit, as will also the small quantity of water we shall have to raise from the bottom of the mine to that point. The tribute pitches are without alteration.

EAST BLUE HILLS.—S. Bennetts, March 15: The lode in the adit east end is from 2½ to 3 ft. wide; the leader part of it, however, is not so wide at present as it has been, and is worth 7*l.* to 8*l.* per fathom. In the 40 east end it is 3½ ft. wide, and worth 8*l.* to 10*l.* per fathom; and in the rise above the adit it is worth 6*l.* per fathom.

EAST CARADON.—W. George, J. Kellow, March 15: Setting Report: During past month the 175 cross-cut has been driven 1 fm. 1 ft., where we have crossed several small branches, containing mundic and good spots of yellow copper ore, and we expect soon to intersect the south part of caunter lode; now set to nine men, at 20*l.* per fathom. The 150 fm. level has been driven east on the caunter 3 fms. 2 ft. 6 in., the leading part of the lode being about 1 ft. wide is yielding good stones of ore, with mundic intermixed, and looking very promising; this bargain to be continued as set last month at 9*l.* 10s. per fathom. The 130 cross-cut has been driven south 1 fm. 2 ft., and set to four men, at 7*l.* per fathom. The ground here has improved since the driving was resumed. To stope the back of the 70 east of winze on Fawcett's lode, by six men, as per bargain set last month, at 4*l.*, worth 1½ ton of ore per fathom. To stope the bottom of 60 west of winze on Fawcett's lode, by six men, at 3*l.* 2s. 6d., worth 1½ ton per fm. To stope back of 60 on Fawcett's lode, by four men, at 3*l.* 10s.; worth 1 ton per fathom. We have set three tribute pitches, to six men, at 15s. in the 1*l.*, and have sampled for sale on the 23rd inst. (computed) 65 tons.

EAST CRAVEN MOOR.—D. Williams, March 16: The south-west cross-cut from the end of the 76, west of shaft, is now within 2 fms. of reaching the main lode west of the heave. The lode upon the horizontal bed in back of the 54 has improved during the week, and is now 4 ft. wide and worth 3 tons of lead ore per fathom. We have weighed off the produce in pig-lead of other 25 tons of lead ore, and are carting same to the smelting mill. Full report next week.

EAST LONG RAKE.—H. B. Vercoe, March 16: There is no alteration in 50 east since my last report, the lode being 2 ft. wide, producing nice lumps of ore, and the general character of the ground indicates a cross-lode near at hand. In the 50 driving west the lode is very much larger; in fact, we have neither hanging nor footwall in the drivage. The lode is very promising, and ground easy for progress. We are urging on this end with all possible speed, as we have some very important junctions before us, and which we are naturally very anxious to intersect, believing that immense deposits of ore will be found. In the 50 cross-cut north I believe we have pricked into the Old Long Rake lode; at any rate we have carbonate of lime spotted with lead in the forebreast, and as the distance where the lode should be found has been driven, I have no doubt but that this is a portion of it. As yet very little of it can be seen, but by the time of my next report I hope to be able to give full particulars. The lode in the rise and stope in the roof of the 50 west produces 1 ton of lead per fathom. I am looking out for more miners for the shallow flat, as nothing has been done in that direction for the last week. Dressing progressing well, and we shall sell another parcel of rich ore at the next Holywell ticketing.

EAST ROMAN GRAVELS.—Arthur Waters, March 16: There is no material change here since our full report of last week. We have not yet holed the 97 south of shaft to the 97 coming north from winze, but expect to do so every blast that is made. The levels are on different divisions of the lode, but we can hear very plainly between the two points and hope to have a hole through shortly. We have to-day sold 40 tons of lead ore for 389*l.*

GAWTON COPPER.—G. Rowe, G. Rowe, jun., March 11: The lode in the 117 east continues to look well, with a value of 20 tons of arsenical mundic and ore per fathom. The lode in the stope in the foot of this level (the 117) is worth 8 tons of mundic and ore per fathom. The lode in the 105 end is worth 10 tons mundic and ore per fathom. The lode in the winze sinking below the 105 is worth 10 tons of mundic and copper ore per fathom. The lode in the stope in the back of the 105 is worth 8 tons of mundic per fathom. All other points are without change, and the arsenical department going on well.

GLASDIR.—March 15: In the stope in the west end of No. 2 (10 men) the quality of the ore is good, and the ground more convenient for working. In the stope in the west end of No. 1 (seven men) the quality of the ore is very good; supply here for months. The ore dressing progresses satisfactorily; requires seven men, two youths, and one boy. The ore is of better quality, and quantity up to the average.

GLASGOW CARADON CONSOLS.—Wm. Taylor, W. J. Taylor, March 14: South Lode: The 114 east has a better appearance, the lode is more settled, and likely soon to be more productive, now worth from 8*l.* to 10*l.* per fathom. The 114 west, on this lode, is worth 7*l.* per fathom, and also likely to improve; both these ends are being pushed on in a good channel of ground, which we think cannot fail of being increasingly productive. We have been enlarging the top plat by the shaft in this level for better discharging the stuff, and as soon as possible sink for tip-plat and fix tramrod, &c. Harvey's lode, in the 102 west, has improved, now worth 8*l.* per fathom; the ground is very favourable. We intend to drive the 90 over this in a few days; we have a quantity of whole ground in this direction. The stopes throughout the mine are valued at from 10*l.* to 12*l.* per fathom, and the tribute pitches on the whole are turning out about their usual quantities of ore.

GODDARD'S LEAD.—R. H. Vivian, March 16: We have not taken down the lode in the stope east of engine-shaft since last week, but from what we can see from a piece which came from the lode to-day, by a shot, it appears to be equally as good, if not be ter than last week. We have a little stuff to draw to surface; when this is done we shall strip down the lode, and you shall have its value in my next.

GOVER CONSOLS.—William Hooper, March 13: The work in Tamblyn's engine-shaft is progressing very satisfactorily. We are sinking from 8 to 9 ft. a week, and are now about 6 fms. below the 10 fm. level, and hope in the course of three weeks to reach the 20 fm. level. No doubt when this is accomplished it will open a splendid run of tin ground, which will enable us to commence operations at once. My reason for this is, we have seen the great lode making its appearance in Tamblyn's engine-shaft, and have seen some splendid branches of tin in same. There are a full staff of men engaged driving west on the great lode, which is pregnated with tin. Our machinery throughout is working satisfactorily.

GREAT HOLWAY.—W. T. Harris, March 16: Roskell's Shaft: In the 110 west the lode is undergoing an improved change, and I am daily expecting to have something good to communicate. In the 95 north we have made what at present appears an extraordinary discovery, and to-day have brought to surface some magnificent rocks of lead fully 1½ cwt. in weight. Full particulars for the meeting. The other parts of the mine without material change.

GREAT LAXEY.—F. Reddicliffe, March 15: Driving the 259 fm. level north has been resumed this month, and we hope to be able to continue it now with less interruption. The cross-cut in the 247 end north is now, we think, through the lode, which proves to be divided into several branches, no doubt by the influence of the slide recently passed through. The value of all the branches together is about 15*l.* per fathom, but we fully expect them to converge quickly going north, and form into a good lode. The three stopes in the 235 have each somewhat improved, the present value being 18*l.*, 20*l.*, and 20*l.*, respectively. A new stope has been started south of shaft at this level, which is worth at present 12*l.* per fathom. Two of the stopes in the 219 are worked out and the men placed elsewhere. In the Dumbell's portion of mine there is no change whatever to notice, and it is scarcely necessary for me to detail the value of the various working places now, as our half yearly report will so shortly be handed to you. The small wheel for pumping water from the north shaft temporarily has been erected, and it is at work, and we expect now to continue sinking without interruption.

GREAT POLGOOTH UNITED.—W. Richards, March 13: New Engine-Shaft: The surface is again drained down, and the men continue to make their usual good progress in sinking. The ground is easy and of a beautiful description for the production of mineral, and I am of opinion that as soon as this channel of ground falls in with the lode that good results will be obtained.—Great Flat Lode. At this point we have got through the crossing, and find that it has heaved the lode. I have now put the men to cross-cut, in order to open it up, which I expect will be done by a few feet driving.—Wheeler's Lode: Here the men have completed their bargain, in cutting the ground for plat, &c., and are now engaged taking up the water, putting in penthouse, and doing sundry preliminary work preparatory to sinking the shaft.—The Tip Level: Here we are not yet got through the run, but expect to do so daily.—Engine: The engineers are making good progress; I hope they will soon finish putting in the engine. We are pushing on the building of the boiler-house, &c., with all possible dispatch, and hope in the course of next week we shall test the boilers and put them in their places. We are urging on our surface works as fast as we possibly can.

GREAT WEST CHIVERTON.—John Curtis, March 14: In the deep adit west on the north lode it is 18 in. wide, with stones of yellow mundic and spots of blende in it. The ground is much the same as for some time past.

GREEN HURTH.—J. Polglase, March 9: The lode in Swan shaft is worth 5 tons of ore per fathom; the shaft is sunk the required depth for the reception of the new pitwork; cistern plat is cut, &c. The new plunger-lift will be fixed at once, and the sinking resumed. The bottom level north is worth 6 tons of ore per fathom. The stope in back of above level is worth about 4 tons of ore per fathom. No. 3 stope is worth 1 ton of ore per fathom; this point will soon improve. In No. 4 it is worth at present 1 ton per fathom; we shall soon be in better ground in this stope. No. 5 stope is worth 3½ tons of ore per fathom. In No. 6 the end is in a mass of lode remarkably soft, and producing good stones of lead; there is every indication of mineral from this point. The cross-cut south of adit level is progressing as usual. Dressing going on well.

GWYDYR AMALGAMATED.—J. Roberts, W. Sandoe, March 15: Clementina: The south end at the 44 is now producing some good stones of lead, and we expect shortly to cut the east and west lode, which has been very productive the upper levels, and there are equally the same chances, if not better, to be quite as productive at this level. The lode in the north end at this level is opening wider, and the end is now getting near the run of lead ground. The south end is much the same as for some time past. The rise at the north of the shaft at this level is looking very well, and worth fully 1 ton of lead to the fathom.—Aberllyn: The rise at No. 2 is now up 3 fms. The lode is still hard and spare for getting up, but is producing some good blende and strong patches of lead. The stope at the bottom of this level is now getting into some of the better blende ground that we had when driving the level, and looking very well. The end at No. 3 is without any change.

HINGSTON DOWN CONSOLS.—Thomas Richards, March 15: The lode in the 25, east of the engine-shaft, is producing some good stones of copper ore. In the 12, east of the shaft, the lode contains capel, quartz, arsenical mundic, and occasional good stones of copper ore. The lode in the stope in the back of this level is worth about 1 ton of ore per fathom. In the deep adit level, east of the south cross-cut, the lode contains capel, quartz, and mundic, and some good stones of grey copper ore. In the stope in the back of the deep adit level, on No. 2 lode, the lode for a short length is worth 1½ ton of good ore per fathom. The ground in the south cross-cut is favourable, and good progress is being made. The ground for the dressing-floors is being excavated.

KIRK MICHAEL.—R. Rowe, March 15: The 20, driving north towards the slide, has not yet improved, the lode being still in disturbed ground, and until the slide is reached I hardly expect a change. We have not met with anything yet in the 20 cross-cut, driving east on the slide.

KIT HILL.—Isaac Richards, March 16: Very fair progress continues to be made in driving the tunnel level. In the north engine-shaft, sinking below the 62, the lode is 2½ ft. wide, composed of a large proportion of quartz, capel, mundic, and occasional stones of tin ore. In the 62, west of the north engine-shaft, the lode is 3 ft. wide, of a very promising character, and yielding some saving work of tin ore. In the 62, east of the north engine-shaft, the lode is 3 ft. wide, composed of quartz, capel, peach, mundic, and good stones of tin ore. Our surface excavations are being got on with very satisfactorily, and the engine for working rock drill machinery is being taken abroad for convenience of removal, as soon as the foundation is made ready for its reception.

LANGFORD.—J. W. Doble, March 15: I have forwarded you to-day by the carrier from this place five small specimens of matte, obtained from five different experiments on the ore from the Langford Mine, and which I assayed yesterday, and obtained the following produce for fine sliver from each sample:—No. 1, 26 ozs. 3 dwts. 16 grs.; No. 2, 49 ozs.; No. 3, 32 ozs. 13 dwts. 8 grs.; No. 4, 65 ozs. 6 dwts. 16 grs.; No. 5, 52 ozs. 5 dwts. 8 grs. per ton of silver. The difference in the quality of the matte is chiefly owing to the amount of blast in the furnace, and also the difference in the quality of ore operated on, some containing 8 ozs., while others from 10 to 11 ozs. per ton.

LEADHILLS.—Arthur Waters, March 16: Brow Vein: Cripp's adit, going north of Glengower engine-shaft, is in a lode 4 ft. wide, composed of good-looking quartz, which is the usual matrix, and the indications point to our near approach to a run of ore ground. The pitch in back of the 30, south of shaft, by two men at 90s. per ton, is worth 20 cwts. of lead ore per fathom.—Hopeful Vein: The pitch above Gipp's adit, north of the above shaft, by four men, at 70s. per ton, is worth 20 cwts. per fathom.—George's Roust Vein: Gripp's adit, north of Muir's cross-cut, is in a lode 2 ft. wide, composed of quartz, but without ore to value. This end is going away into virgin ground nearly parallel to Brown's or Susannah great lode, and the trial is looked upon as being of great moment to the company.—Brown's or Susannah Vein: The 100, going south of Jeffrey's engine-shaft, is opening out a lode 4 ft., composed of quartz, calc, spar, and lead ore, worth at present 20 cwts. per fathom, and improving again. The 85 south is in a lode 5 ft. wide, worth ½ ton of lead ore per fathom. We shall see an improvement here shortly. The stope above this level south is worth 25 cwts. per fathom. The 70 south is now in the twitch, which can be seen from the 10 downwards south of which the main body of Wilson's run of ore has regularly been found. Lode in present end is improving daily, and we shall soon be full to the bunch, which will continue all the way to Wilson's shaft, and beyond that point. The stope in back of said level behind the end is worth 5 tons per fathom. We are preparing to sink a winze below the 70 on north end of the bunch (the one is dipping north), where the lode is worth 3 tons per fathom. We suall try to get winze down in time for the coming up of the 85 forebreast.

The drift south of Whitfield's winze below the 41 on new discovery is worth 20 cwts. per fathom. Grierson's winze below the said 41, on north end of Wilson's run, is worth 3½ tons per fathom. The 41 end men are now stripping down lode to full width on hanging wall side, and going forward to Wilson's shaft; vein 6 ft. wide, worth 3 tons per fathom. This ground will be squared south to shaft by end of this month. The shaftmen here will have squared and timbered shaft to bottom by end of the next fortnight, when they will commence driving the 41 south in a lode worth 3 tons per fathom. The stope above this level on new discovery is worth 20 cwts. per fathom. The stope above ditto, south of Brown's winze, on Wilson's run, is worth 7 tons per fathom. The stope above the 30, north of Wilson's shaft, is worth 4½ tons per fm. The stope above the 10, south of Moffat's winze, is worth 2½ tons per fm. Gripp's adit, south of junction of Dobie's vein, on Brown's lode, is opening out a nice looking lode, which has just commenced to yield some lead ore and blende, and looks like improving. Tribute pitch on Brown's lode, south of Jeffrey's, by two men, at 90s. per ton; worth 10 cwts. per fathom.—Raik Vein: The 10, south of Watson's shaft, is worth 10 cwts. per fathom. The drift below Gripp's, south of No. 2 winze, is worth 10 cwts. per fathom. The 6 fm. level below Gripp's, north of Sommerville's winze, is also worth 10 cwts. per fathom. The 6 fm. level, north of winze, is worth 10 cwts. per fathom. Pitch in Gripp's, north of Jeffrey's cross-cut, by two men, at 90s. per ton; worth 15 cwts. per fathom.—Jeffrey's Vein: The stope in the 10 west is worth 2 tons per fathom. Pitch above Gripp's west, by two men, at 90s. per ton; worth 20 cwts. per fathom.—P.S.: We have ordered powerful pumping and winding machinery, which will be delivered forthwith.

LOVELL (THE).—J. Prisk, March 16: South Lode: The lode in the 33 is a little disordered by granite, but is producing some good work. The lode in the rise in back of the 33 is 9 ft. wide, worth 12*l.* per fathom. The lode in the 50, east of sump winze, is 6 ft. wide, producing low quality work, but improving as we advance. The lode in the 56, west of sump winze, is 8 ft. wide, a very kindly point, and I think will soon be valuable. The lode in the stope in back of 33, west of engine shaft, is 10 ft. wide and worth 14*l.* per fathom.—New North Lode: The lode in the 20, east of engine-shaft, is improving in appearance daily, and we expect shortly to be under the run of the ground driven through in the level above. I am pleased to say the mine throughout is looking better, and I think likely to generally improve.

MELLANEAR.—John Gilbert, March 15: There is no change since the report last week in the 30 cross-cut driving south of Gundry's shaft. The 70 cross-cut, driving north from the main lode, is still in the elvan course, which is very hard, and letting out an increased quantity of water. The 80, driving west of Gundry's shaft, on the north part, has formed a junction with the main lode. We have put the men to stope the back of this level, in a lode worth 4½ tons of ore per fathom. This loop, which is about 20 fms. in length, has opened out a good piece of ore ground. The winze sinking in the bottom of the 90, west of Gundry's shaft, is yielding 2½ tons of ore per fathom. In the 100, west of shaft, the lode is 4 ft. wide, and yielding 1½ ton of ore per fathom, and the ground continues very easy for driving. In the 110, west of shaft, the lode is 3 ft. wide, yielding 1 ton of ore per fathom, and looking promising for further improvement. The rise in back of this level is still yielding 1½ ton of ore per fathom. In the 110, east of shaft, the lode is 5 ft. wide, and yield 1½ ton of ore per fathom. In the 120, east of shaft, the part of the lode driving on is 5 ft. wide, and yielding 1 ton of ore per fathom and some good stones of tin, and looking kindly to improve. In the 110, east of the old engine-shaft, the lode is 4 ft. wide, and yielding good stones of copper and tin ores. The lode in the 110, west of the old engine-shaft, is 2½ ft. wide, yielding good stones of tin, and looking promising to become more productive. There is no change in any other part of the mine.

MORFA DU.—T. Mitchell, March 15: The stope in back of the 60 continues to look much the same as for some time past, and need no special remarks. The lode in the pitch in back of the 40 is opening out wider, and one part near the hanging side contains good solid bluestone, whilst the other part is being mixed bluestone and black chert, but, on the whole, it looks pretty well. The pitch in the back of the 20 has recently holed through to some old working, but we find good bluestone extending in the ground that is not worked away. The winze in bottom of the 20, at Ida shaft, is still going down by the side of the lode, but we intend cutting into the lode very shortly to prove its value. We shall commence loading another vessel with bluestone to-morrow.

MOSTYN CONSOLS.—J. Woolcock, March 15: Furness shaft has been repaired and we have driven 7 yards south to reach the wall of the lode, but up to this date have not reached it; the matrix of the lode is precisely the same as that at West Holway, and is all which can be desired for the production of lead ore. The level east from engine-shaft has greatly improved, and is now producing better ore, or in other words a greater quantity of ore than at any other period. Since we commenced working our managing director, J. Furness, Esq., has had a personal inspection of the mine, so also has our respected broker, who thoroughly understands mining, and I think that they must be well pleased with what they have seen in the mine. The west level is producing good stuff for the washing-floors. No time should now be lost in sinking the engine-shaft in order to get a deeper level. A practical gentleman who worked for many years in the American mines went through Mostyn Mine, and agreed with me that this was the proper course now to pursue, and said if this was done that he would not hesitate in taking some shares in the mine. On the whole, our prospects were never brighter. All machinery works well.

MOUNTS BAY CONSOLS.—Wm. Argall, John James, John Rowe, March 11: Trebarvah: In the engine-shaft sinking below the 50 we have several branches producing good stones of copper ore; these branches are converging, and as soon as they get together a good deposit of copper ore may be expected. We are making fair progress in driving the 50 cross-cut south. The lode in the 40, west of engine-shaft, is 2½ ft. wide, containing white spathose, blende, and iron pyrites. In the 62, west of Richard's shaft, the men are making good progress in driving, but we are not yet under the bunch of ore gone down from the 57 winze. In the stope in back of the 57, west of Richard's, the lode is worth 8*l.* per fathom. The lode in the tribute pitch in back of the 40, west of Richard's, is worth from 3*l.* to 4*l.* per fathom. A tribute pitch is also being worked on the north lode for tin.—Sydney Cove: We have cleared the engine-shaft 5 fms. below the 10, and are pushing on as fast as possible. The 10 fm. level on south lode has been cleared for 50 fms.; we found that the bottoms had been all stoped away for about 30 or 40 fms. in length. On the north lode this level has been cleared for about 30 fms. Some portion of the bottom of this level has been also stoped away. We have four men now driving this level east on the lode, which is about 1 ft. wide, containing stones of copper ore. A cross-cut will soon be put out from this point to cut Browne's tin lode. In the north part of the sett we have been clearing adit and have opened on three lodes each, containing payable tinstuff, the lodes varying in size from 2 to 4 ft. wide, and easy ground for working. We are progressing with the surface operations, and the engine is working very well.—Pembro: We expect the masons will finish the stack and boiler-house of the steam whim-engine in the coming week. The engineers are erecting this engine and doing a little in fixing the pumping-engine; we expect the large fly-wheel and other work from the foundry to-day. The other requisite surface works are being pushed forward.

MOUNT CARBIS.—W. Tregay, Geo. Johns, March 16: We are not yet through the lode in 38 north, consequently cannot report its value. So far as seen it is a rich course of tin. All other places as last reported.

MYNYDD GOEDDU.—Thomas Kemp, March 15: The lode in the 46 end, west of cross-cut, for the width carried (5 ft.) is composed of killas, carrying ribs of calc-spar and quartz, occasionally yielding good stones of lead ore. For some time past the end has been dry, but in the past day or two a strong feed of water is issuing from the forebreast, which gives indications that we are nearing the next bunch of ore gone down in No. 2 stope, under the 34 fathom level. In cross-cutting north in this level, in order to get under the bunch of ore referred to in last week's report, the men, owing to the hardness of the ground, are making slow progress. The part of the lode opened on by the 46 end, east of cross-cut, is chiefly calc-spar, intermixed with patches of killas, spotted with mundic, in ground less favourable for opening. The lode which is being stripped down in the winze under the 34 is composed of killas, calc-spar, and quartz, carrying good ribs of ore, worth 12*l.* per fm. The different stopes throughout the mine are without any material change, being equal in value to last week's report.

NEW KITTY.—Wm. Vivian, March 16: We have divided, cased, and put down footway from the 24 to the 36 in the engine-shaft. We are now cutting plat at this level; when we have completed this I purpose to drive north to intersect the flat lode cut in the engine-shaft about 5 fms. above the 36. In the 24 driving west the lode is about 2 ft. wide, of a very promising appearance. In the 14 driving west the lode is about 2 ft. wide, producing a little tin, but not to value.

NEW WEST CARADON.—N. Richards, March 13: In the 38 cross-cut, south of Hallett's shaft, we have not yet reached the north part of the lode wrought on in the last working, and from which we sold several thousand pounds worth of copper ore we cannot, however, have more than 3 or 4 fms. further to drive to reach it, provided it is not heaved from its regular course by cross-heads or branches. I would here remark that about 35 fms. west of this cross-cut the lode is split, and we find from the dialling that we shall have about 10 fathoms further to drive to reach the south part; of course it is quite uncertain which of the two will be found most productive. We intersected a branch some distance behind this end; this we think cannot be the branch referred to, the branch we are now opening out on east of this has a very promising appearance, and will yield fully 1 ton of copper ore per fathom. The rise we are putting up in the back of the 42 is in a good channel of ground, the lode in which has a very promising appearance, and will yield 1 ton of copper ore per fathom.

NORTH GREEN HURTH.—Jas. Polglase, March 9: The driving is continued south from the deep adit level, which has shown good bits of lead ore. No change in driving south from shallow level. The vein south from the boundary is still unsettled, but will gain back as we advance.

NORTH HERODSFOOT.—T. Trelease, March 16: The lode in the 117 is yielding a little more lead now than it was when last reported, and from its appearance we may reasonably expect a further improvement; the stope in the bottom is yielding 8 cwt. of ore per fathom. I have put two men to rise in the back a few fathoms behind the end at this level to prove the value of the lode going up. The ground in the 80 cross-cut is somewhat easier than it was last week, add is still intermixed with quartz, &c., and judging from the strata and the water issuing from the end I think we cannot be far from the lode.

NORTH WALES FREEHOLD COPPER MINES AND SMELTING.—H. B. Vercoe, D. Douglas, March 15: You will be pleased to hear that since my special report was written the mine has considerably improved, and we are now in a position to raise much larger quantities of ore than at any time since this company became possessed of the mines. At the engine-shaft sinking below the 30 the character of the grounnd has changed, the rock being lighter in colour, and contains more quartz, the latter being spotted with rich copper ore. All these we consider very favourable indications, and that the lode will be found increasingly rich in the 40 we have not a shadow of doubt. In the 30, driving north from engine-shaft, we have a wide and rich lode—its width we cannot say, as we have 6 ft. carrying in the drivage, with lodestuff and ore still standing on the hanging-wall side; this end has now a better lode in sight than at any former time, and confirms the opinions we have always expressed that the ore would be found to continue and increase as depth is attained. In the 30, driving south from engine-shaft, we are driving on the eastern portion of the lode; it looks very promising, and produces a fair mixture of ore for crushing. No. 2 sump has been communicated with the 30 north, at the engine-shaft. We have now perfect ventilation throughout the mine, and have commenced stoping above the 30. As you have before been advised, we have a large quantity of ground here in reserve, containing rich ore; this we have been unable to attack until now to advantage, and good returns of ore may now be looked for. We are very pleased to be able to supplement the good report read at the meeting by a better one, and it is certain that if the shareholders only saw their valuable property they would all be satisfied. I understand that the board have determined to raise further capital on preference shares, and I have great pleasure in offering to subscribe for my quota, believing that by so doing I obtain an interest in one of the best of investments, and one that is likely to pay permanent profits.

NORTHERN LEAD.—Thomas Tonkin, March 16: There is an improvement in the tribute ground above the 42 fm. level, west section. The men are at present taking down but a portion of the lode near the main leader, and the yield of this portion is about 12 cwt. to the fathom. When the other portion of the lode is worked into I expect we will have a yield of above 20 cwt. of ore to the fathom. The east section stopes are looking well at present and yield 10 cwt. to the fathom in easy ground. The 15 fm. level stopes yield 10 cwt. of ore to the fathom.—Brandon Wails: True to the former richness of this mine, the more we prove the ground the better is the yield of ore and indications of improvement in time to come. The lode in the 37, west of shaft, is gaining strength as we advance, and will now yield 25 cwt. of ore to the fathom. The drivage east in this same level is also looking well, and a good discovery of ore is very likely to be met with in the 50 fm. level.

OKEL TOR.—H. Bulford, J. Rodda, March 16: Since last week there is absolutely no change to report.

PANDORA.—H. Nottingham, March 16: New lode, 45 fm. level: The end, driving south, continues to look well, worth quite 1 ton of lead and 1 ton of blende to a fathom, and ground better for driving, seeing that we have driven the 33 about 20 fms., south of this, through a strong grey lode, and that this end is now looking so well I think we have every reason to expect a profitable section of ground along here, in addition to the No. 1 run of ore we have driven through. The stopes taken altogether are of the same value as last reported. We have now very fine weather for surface work again, and are pushing on the dressing with good speed. Machinery all working well.

PARYS COPPER CORPORATION.—T. Michell, March 15: The 90 west, on No. 2 lode, is still rather poor; the ground appears to be shifted altogether towards the north-west, and we are now driving strongly in that direction: we have strong patches of copper ore, and we hope to have an improvement here shortly, as the ground looks very promising. The lode in the rise here is not looking quite so well at present, the ore being mixed up with chert and country rock; it will yield about 3 tons per fathom. The lode in the 90, east of cross-course, continues to look much the same as when last reported. This place so far is opening up pretty well, and extending into new ground. The tribute pitches are looking out much the same as usual. We purpose sampling the copper precipitate next week.

PENBERTHY CROFTS.—John Curtis, March 15: The 30 is driven west of the engine-shaft 22 fms. The lode has varied in value from 2*l.* to 8*l.* per fathom. In the last 10 ft. driving the ground has been unusally hard and the lode small, but am glad to say from my inspection to-day the ground is more easy for driving, and the lode in the end letting out out a large quantity of water and improved in value. Eight men are stoping the back of the level, where the lode is worth 10*l.* per fathom; stoping at 40s. per fathom. The 10 is extended east of the shaft 8 fms. Lode in the end is split somewhat, and 3 ft. wide, with good stones of tin in it, and looking kindly to further improve as the level is being extended. The engine-shaft should be sunk at once, and the 20 west be driven, and by so doing it would greatly increase our sale of tin. Our last month's sales of tin left a profit of over 20*l.*, and our next sale from present appearance will be equally as good.

PENHALLS.—S. Bennetts, R. Harris, March 11: There is no change to notice in either the 80 or 60 cross-cut north. In the 70 east the lode is in connection with a fault, and on each side it is small and not of much value. The winze below the 55 east is worth 15*l.* per fathom, and the 40 west on the north lode is worth 12*l.* per fathom. The other points of operation are without much alteration.

PENNANT.—We are urging the driving of the 40 east in a very fine lode, producing quantities of mineral for the dressing floors. The stopes are looking as for some time past, and the general progress is very satisfactory.

PIONEER.—March 14: Silver-Lead Mines, Holywell: Bessie's shaft has improved since last report. The men have been set to rise in the roof about 5 yards from the end of the north level, in order to intercept the ore ground we are working on in the other rise, and which shows to be dipping north; they have already began to get some nice lumps of ore. Carrington's shaft continues much the same, yielding small leadstuff, intermixed here and there with nice lumps of ore, which will pay very well for working.—Engine Shaft: The men from the 60 east have been moved to the 75 east in order to urge forward this more important point. The rise in the roof of the 60 is not looking so well, but still yields very nice lumps of ore, though not sufficient as yet to pay for working. The 75 east has been cleared out to the end, but we have not yet had time to make much trial on it; we have had, however, some nice lumps of ore the last two days, with every prospect of the quantity increasing when we intercept the north and south lodes already proved in the swallow, and which may be met with in a few yards further driving.—Dressing-Floors: We sold the parcel of ore last week. The 2 tons of round ore fetched 12*l.* 10s. per ton, and the small ore 9*l.* 12s. 6d. per ton. We are now busy preparing another parcel for sale.—Pioneer Copper and Lead Mine, Harlech: The lode still shows small in the forebreast, but we have met with a crossing which is very likely to make a favourable change in its character, and we shall prove more about it in a few days.

POLROSE.—W. Bennetts, March 15: There is no change in the 100 west, on Margaret lode, since my report for the meeting. The shaftmen are engaged cutting ground for dams in the 90 cross-cuts. The lode in the 90, east of north cross-cut, continues about 1 ft. wide, yielding a little copper ore. The lode in the west end is also about 1 ft. wide, composed of blende, mundic, and a little copper ore. We have not seen any sign of the lode in the 70 fathom level north yet.

PRINCE OF WALES.—S. Roberts, G. Rowe, March 15: The lode in the 102 fm. west is 3 ft. wide, composed principally of capel, with a little mundic, tin and copper throughout, and letting out more water—a very kindly lode. In the 102 fm. level east the lode is 2 ft. wide, producing splendid stones of tin and copper ore; here the water is also increasing, which is a very favourable indication. The lode in the 90 end west is 3 ft. wide, worth 7*l.* per fathom for tin and copper ore. Stope in back of this level, lode 5 ft. wide, worth 10*l.* per fathom for tin and 4*l.* for copper ore. We have suspended driving the 90 fm. level east, for the present, to put these men at the 102 fm. level, to put in tram-road. No. 1 stope, in back of the 90 east, worth 8*l.* per fathom for tin and copper. No. 2 stope, lode 3 ft. wide, worth 14*l.* per fathom for tin. No. 3 stope, lode 3½ ft. wide, worth 9*l.* per fathom for tin. No. 4 stope, men are still working by side of the lode.—Goodluck: No lode yet taken down, consequently no change to report.

ROMAN GRAVELS.—Arthur Waters and Son, March 16: There is no change here of note since our report of the 9th inst. The 80 south of new engine-shaft is holed to the 80 north of Jones' winze, so that we now have a rich section of ground laid open for stopes. Surface work going on well this fine weather. We shall sample again next week.

RUSSELL UNITED.—J. Bray, March 16: Last Saturday being our pay and setting day, the following bargains were set:—Stephen's engine shaft to sink by six men at 18*l.* per fathom. The 97 east by four men at 7*l.* 10s., lode from 3 to 4 feet wide of a highly promising character. The 55 to drive east on a cross course by four men at 8*l.* per fathom, lode 2 feet wide, producing promising stones of ore and mundic.

SINCLAIR.—New Shaft: We are making capital progress n walling this up. To-day we made a start with the engine, which works admirably. Considering we have only taken five weeks not only to erect it, but also for building a substantial house over it, I think you will admit we have done very well. Our force will now be increased underground, and I have not the least doubt about being able to report very soon an important discovery.

SILVER HILL.—G. Richard, March 13: I am pleased to say that in driving west on Wheal Brothers lode it has very much improved in quality, and from results of assays made to-day it produced 22 ozs. 17 dwts. 8 grs. of silver to the ton of stuff. The highest sample assayed before was 7 ozs. I hope, therefore, we shall go on imoroving until we have got a very rich lode.

— G. Richard, March 16: During the past week the ground in driving the tunnel cross-cut north has not been so favourable for progress, and in consequence our speed in extending the drivage has not been so rapid as hitherto, but we still find veins of mundic and copper ore crossing the end as we proceed. In driving west of tunnel on the Wheal Brothers lode we find it carrying a leader about 4 in. wide, and from samples assayed it has very much improved in v lus since we started, and with every indication of further improvement as the drivage proceeds. The machinery is working satisfactorily.

SORTRIDGE.—Wm. Skewis, March 15: The new tin lode alluded to in last week's report is about 12 fms. to the north of the main copper lode. We have cut through it in two different places, about 10 fms. apart; it varies in size from 2 to 5 ft. wide, well defined, with a north underlie. We have broken about 30 tons from it, and sent the same to furface, and when fairly sampled will report on its value. From present appearances the lode is a most important and valuable discovery, as it stands in whole ground to surface, and runs through the entire length of the prop rty. When the a lit is cleared of water the lode will be explored in the 40 and 50, and a valuable tin mine opened up at very little cost. All other work at the mine is progressing in a most satisfactory manner.

SOUTH CONDURROW.—Wm. Rich, W. Williams, H. King, March 15: We are urging on the sinking of Marshall's shaft below the 50 by six men; the lode in the bottom is worth 10*l.* per fathom; we shall begin to drive east and west at this depth forthwith. The lode in the back of the 40 west is worth 10*l.* per fm., and it is of the same value in the back of the 40 east. The rise in the back of the 33, east of King's, is unproductive, but we hope soon to intersect the main part of the tin lode in this rise. The lode in the back of the 80 east is worth 12*l.* per fathom. The 80 end, east of Plantation, is worth 7*l.* per fathom. The 7, east of King's, carries good stones of copper, and is letting out water freely. The 60 end west is worth 7*l.* per fathom The lode in the bottom of the 60 west is worth 15*l.* per fathom. The 50 end east is worth 7*l.* per fathom.

SOUTH DARREN.—Henry James, March 16: The lode in the 130 west is opening out wider and composed of a nice spar intermixed a little with lead and copper ores. The character of the rock is very congenial for ore, and from appearances I expect the lode will improve as we advance. The same remarks will apply to the 130 east. In the 120 end east the lode is strong; worth 2 tons lead and 1 ton copper ores per fathom. The lode in the same level west is opening out wider and richer for ore, at present 2 feet wide and worth 1 ton of lead and 1 ton copper ores per fathom; no doubt it will further improve as we advance. The winze sinking in the 110 west is down 6½ fathoms, and is about 8 fathoms in advance of the 120 end. The lode in the winze is worth 2 tons silver lead ore per fathom. The stopes and tribute pitches are producing their usual quantity of ore. All the machinery is in good order and working well. The 45 tons silver lead ore sold on the 10th inst. realised 663*l.* 15s., and the 45 tons of copper ore 162*l.* 7s. 6d.: total 826*l.* 2s. 6d.

SOUTH DEVON UNITED.—William Hooper, March 16: The lode in the 110, east of Brook engine-shaft, is 5 ft. wide, with a value of 25*l.* per fathom, and presenting as for some time past its very promising appearance, and will no doubt continue to lay open valuable ground, as the 100 was very productive a great distance beyond the present end. The stopes in the back of this level are yielding their usual quantities of copper ore. The lode in the rise against Martin's shaft in the back of the 100 is 4 ft. wide, producing mundic and stones of rich ore. The ground here is very favourable for forking, and very good progress is being made. Every effort shall be made to effect a communication with the winze sinking in the bottom of the 90 as quickly as possible. In the winze sinking in the bottom of this level the men are doing good duty, and when hauled will give us good ventilation in this part of the mine. The lode in the winze in the bottom of the 90 is 4 ft. wide, of a very promising character, producing spar, mundic, and copper ore. In the lode in the 80, east of Brook engine-shaft, the part carrying is 5 ft. wide, containing principally spar and mundic. After driving some little distance further in our present direction we intend putting the men to strip down the full size of the lode, when full particulars as to its character shall be given you. No. 1, 2, and 3 stopes in the back of this level are worth 6*l.*, 8*l.*, and 7*l.* per fathom. The lode in the adit level, west of old sump shaft, is presenting much the same appearance as for some time past. Martin's shaft is being pushed on with all possible force; the killas is of the finest description, and good progress is being made. In Pickstone's shaft the men during past week or so have been engaged at the adit level or the old sump shaft taking up all the surface water and doing necessary work which must be done before sinking can be resumed. The water here is almost in fork. The skip-road will also have to be repaired. This work with all others will be pushed on with all force. At surface the carpenters have been busily engaged putting up new pulley stands from the shaft to whim-house, and making other alterations which must be attended to.

SOUTH TOLCARNE.—Thomas Angove, Samuel Arthur, March 15: Our preparatory work is progressing very well; we have finished the two trip plots, one at the 50 and the other at the 60 fm. levels. The tramway in the 50 is also laid. The 50 end east we shall commence to drive forthwith; the lode in this end was last reported 4 ft. wide and worth 7*l.* per fathom. The sump men are securing the ground about the engine-shaft at the 60, to complete the tramway for the western end, also to sink the shaft, which we hope to resume in another week. Our engineer promises to complete the winding engine in another fortnight.

SOUTH WHEAL CREBOR.—J. Goldsworthy: I am unable yet to report the cutting of the lode in the 46 cross-cut north to you. The end has just passed through a dropper 1 ft. wide dipping north; this dropper was passed through in sinking the shaft, and will act as a feeder to the lode. The reason the lode has not been intersected is doubtless the hardness of the ground which has caused the lode to give a less underlay than it would have done provided the ground had been easier for exploring. Taking the whole circumstances into consideration, with the highly productive nature of the strata, I think there is before us, and not far ahead, a highly productive mineral lode. The east and west lode in the 16 north is 3½ ft. wide, of a promising character, but little has been done on the lode for the last two weeks, the men having been engaged in other work at surface, &c. On the whole, I am exceedingly pleased with the future prospects. The machinery is in good order, and working well.

TANKERVILLE GREAT CONSOLS.—Arthur Waters and Son, March 15: The mines generally are looking more encouraging than for some time past, and we have hopes now of making progress towards a position of success.—Tankerville Mine: Watson's engine-shaft will be 3 fms. below the 220 by the end of this week, and it is expected to have the No. 1 north lode in the sump at a depth of about 5 fms. We are quite persuaded that this lode will be found productive in depth, and when laid open, together with Tankerville Great lode proper, at the next, say, 235 fm. level, good times will again be in store for us. The 220, east and west of engine-shaft, has developed the said north lode for 40 fms., and the country rock, being of the usual structure and mineral constituents, the filling matter in the vein being beautifully white calcspar, soft galena, and blende; and we look upon this part of the mine as the outcrop of a deep and profitable run of ore ground. There are two stopes in the roof of said level—one west of shaft by four men, and the other east by 10 men, at 6*l.* per ton, each worth together about 3 tons per fathom. We would state here, with the exception of the drivage 40 fms. in length and about 35 fms. removed by the stope men, the ground is whole to the 200 fms. level. The pitch in the 220 east, on Tankerville lode, by six men, at 6*l.* per ton, is worth 1 ton per fathom, men getting good wages. The 208, west of shaft on north lode, is being driven by two men, at 6*l.* per fm. and 6*l.* per ton of ore. This end is now 3½ fms. west of cross-cut; lode 2 ft. wide, worth ½ ton per fm., and it is getting more productive as we go forward. We are not yet far enough to catch the run of ore seen in the 220 slopes Allowing for the drivage—3½ fms. here—the lode is in whole ground to the 192 fm. level. The pitch in the 208, west on Tankerville lode, by four men, at 6*l.* per ton, worth 1 ton per fathom. Pitch in same level west on Robert's lode, by six men, at 6*l.* per ton; worth 10 cwts. per fathom. The 192, west of shaft cross-cut on north lode, is driven about 5 fms.; lode in present end 4½ ft. wide; calcspar and lead ore worth 1 ton per fathom, working by six men, who are driving at 4*l.* per fathom, and stoping the back at 6*l.* per ton. In addition to the drivage (5 fms.) we have stoped about 8 fms., the rest of the lode being in whole ground, as far as we know, to the 40 fms. level, if not to surface. The pitch in 142, west on Tankerville lode, by three men, at 5*l.* 15s. per ton; worth 20 cwts. per fathom. Pitch in 92, east on same lode, by four men, at 6*l.* per ton; worth 12 cwts. per fathom. Two pitches in 74, west on south lode, by two men each, at 6*l.* per ton; worth together 1 ton per fathom. Pitch in 62, east on same lode, by three men, at 6*l.* per ton; worth ½ ton per fathom. No. 2 pitch, on the same lode, by two men, at 6*l.* per ton; worth ½ ton per fathom. Pitch in 32 east, by four men, at 6*l.* per ton; worth 12 cwts. per fathom. We sell 40 tons of best quality lead to-morrow.

Pennerley Mine: The 120 going west of cross-cut west of engine-shaft on Warm Water lode shows a promising looking vein, at present worth ¾ ton of lead ore per fathom. We are not far enough west here to catch the dip of the main run of ore, or shale bunch, which was so productive in the 20, 40, and other upper leve s. The 80 west on the same lode has just entered the shale bunch, the vein in the end being worth 25 cwts. per fathom. The stope in the bottom of this level, west of winze, is worth 15 cwts. per fathom; lode improving as we follow the forebreast. The stope in the back of this level, west of cross-cut, is worth 16 cwts. per fathom. No. 2 stope west is worth 15 cwts. per fathom. The winze in the 120, east on Big Ore lode, is worth 30 cwts. per fathom. The 80 east is worth 10 cwts. per fatham, but an improvement in the lode is expected shortly. The stope in the back of this level east is worth 20 cwts. per fathom. The winze in the 70, east of engine-shaft, is worth 15 cwts. per fm. The stope in the back of the said level is worth 20 cwts. per fathom. The 20 cross-cut, north of Big Ore towards Ben Arthur's lode, makes fair progress. There are three pitches being worked by six men, at 6*l.* per ton; worth together 2¼ tons per fathom. We shall sample 20 tons of lead ore to-morrow.—Potter's Pit Mine: We have cleared and secured the 90 west to the forebreast, and made good our way down the Big Ore sump about 5½ fms., and expect to reach the bottom of it this week. We can already see [some splendid solid orestuff, and it is clear that the run of ore proper is associated with a big cavity, down which we can see as if looking into an engine-shaft. Large cavities like this are, we think, peculiar to Shropshire lodes, and particularly to the mines abutting on the Stipers ones range of highly quartzose rocks. The celebrated old Snailbeach, as well as Tankerville Mine, may be mentioned as evidences of the foregoing proposition, and in both of which great cavities were attended with great runs of lead ore. Here in the bottom of Potter's Pit the temperature to-day is exceedingly high; indeed, the rocks and stones forming the loose stuff we are removing to clear the workings being too hot to to handle or even sit upon. The heat which comes like a constant wave up the cavity also being too much to contend against, hence special provision must be made to enable the men to go on with their explorations. A strong force this afternoon and to-night will be fixing iron pipes to carry down water for cooling and ventilating purposes, and we expect to finish this work by morning. We have known cases in copper and tin mines in Cornwall where excesive heat obtained, but never before in a lead mine has it been our experienced to witness such a phenomenon as that in question. The Dolcoath Mine in Cornwall a very high temperature exists, and it will bear out the thought we have in our minds to say that said mine shows the richest deposit of tin in the world. At the United Mines, near Gwenap, Cornwall, the mean temperature for a long time was of extreme degree, and subsequently a very extensive and profitable run of copper ore was found, upon which the men had to work in relays of four hours at a time. It may be said this is far fetched; still, we think we are arguing from the logic of facts, believing that like produces like, and as we go down here we too shall prove that the chemical heat experienced is the outcome of a great body of lead ore underneath.

We cannot leave this part of our report without saying that the Bog Mine and Potter's Pit are a mile apart, still we have seen the water from the first-named coming out of the cavity of the latter mine like a torrent, Pennerley Mine being between the two. Putting, therefore, all these things together, we do think ourselves justified in advising you to expect a big thing at Potter's Pit. The new engine is working splendidly, and if we can find what we believe to exist here—a rich mine—there will be no difficulty in working it at a vigorous rate. We expect to be able to send a good report on the bottom of the mine next week.

Bog Mine: We have at last made good the main rods to the 148 plunger, reared up the pumps from that point to the other, and when we left the mines this evening the whole of the pitwork was working well throughout. Everything thus far has gone on without a single mishap, and we calculate that every difficulty has been surmounted. We can now breathe freely respecting the forking of the mine to bottom. The 130 cross-cut towards side lode is being pushed on vigorously. The 70 cross-cut towards said lode is getting wet, and the lode cannot now be far off. There are 15 pitches by 30 men at tributes averaging 110s. per ton of lead, and 35s. per ton of blende; men getting good wages. We have to-day sold 10 tons of lead for 9*l.* per ton; 35 tons of No. 1 quality blende for 3*l.* 16s.; and 15 tons No. 2 quality, for 3*l.* 2s. 6d.—General Remarks: We consider Tankerville to be gradually improving, and would say that the monthly cost is fairly reduced. Pennerley, with Potter's Pit, will we believe shortly come to the front. Bog will by-and-bye be in fork, and the various lodes, including the side lode north, be made to contribute to the general returns of the company's mines. We would add in conclusion that we left the mines to-night in better spirits than for several months past, and can only say that no stone will be left unturned in the attempt to bring your property into a profitable state.

— March 16: Nothing new here since our report of yesterday. Everything is being pushed vigorously.—Pennerley Mine: We have sampled 20 tons of lead ore, for sale next week.—Potter's Pit: The heat in the winze below the 90 to-day was almost unbearable, and the men could not do full work. The water has been sent down in pipes, and we are preparing to sink a new winze east of the present one for the purpose of ventilation. We shall soon be able to send up a lot of orestuff from this point.—Bog Mine: The engine is working well, and now all the plunger-lifts from surface to the Boat level, thence to the 148, a distance of about 200 fathoms, are in good order. We hope to get to the bottom of the mine quickly.

TYDDYN GWLADYS.—Thomas Evans: We are daily crushing, having about 60 tons to bank.—East and West Lode: The stope and sump are left with visible gold in sight, and the level is being driven further west to prove ground, which is heavily mixed with lead, blende, and yellow copper. The appearances promise well for a fair yield of gold.—Silver-Lead Lode: We have started an a lit a few fathoms lower, which will give a greater depth for future operations.—No. 4 Parallel Lodes: This adit is being vigorously driven. The vein has greatly increased in width by its junction with another vein, on the margin of which is sulphate of baryta 18 in. solid. The whole looks well throughout.

VAN CONSOLS AND GLYN.—James Roach, March 15: The 70 cross-cut, driving south in lode, is still passing through solid branches of lead; forebreast indicative of a body of ore ahead. To-day we are driving west of 60 cross-cut on a branch of lead; will soon bring under the ore in sole of 50. Ground and matrices congenial to the production of large quantities. New stope above the 50, on south part of lode, contained lead of 7 ft. in width, and is yielding the usual quantity, i.e., value fully 30*l.* a cubic fathom. The lead is lengthening east very fast. In No. 2 cross-cut we are driving east on a portion of the lode containing carbonate of barytes and blende, which, no doubt, will soon lead us to send in good quantities of ore. The end of ground in 50, west of Gundry's shaft, consists almost entirely of Cambrian sandstone and carbonate of lime. This is pushed forward with all energy toward the junction with north lode, where we fully expect to find a permanent course of lead. There is no alteration in the stopes since my last advice. We are drawing and dressing of lead as fast as possible. Our stull is fixed in the 50, therefore shall make greater produce in the future. In course of a post or two I will forward report in detail for the forthcoming shareholders' meeting.

WALKHAM UNITED.—Wm. Phillips, March 15: The ground in the cross-cut at the 32 is easy for progress, and of a very congenial character for the production of tin. We expect to intersect the north tin lode at this point very shortly. The 20 cross-cut is suspended until the lode is intersected at the 32. In the adit level east the lode is still 5 ft. wide, of a most promising appearance. The stopes in the bottom of the adit level east and west of the winze are still looking well, and good work is being broken for stamping and dressing.—West of the River: In the most easterly part of this mine the men are still engaged desuing or uncovering a very promising piece of ground for trial. On last taking down the lode at this point some good tinstuff have been set to work upon it, so that we are now getting into a good condition of working both at surface and underground. We shall be putting some tin in the chest to-morrow, and in the course of a day or so shall be able to estimate what quantity the next batch for sale will be.

WEST CARADON.—N. Richards, March 15: Vivian's lode in the level driving west of Hallett's cross-course between the 38 and 50 fm. levels will yield 2 tons of copper ore per fathom. The lode at this level driving east will yield 2½ tons of ore per fathom. A level driving west of cross-course on this lode at the 38 will yield 1 ton of ore per fathom. A stope in the back of this level will yield 2 tons of ore per fathom In driving the adit level west of main cross-course on Gilpin's lode we have reached an elvan course which for the present has much disordered the lode, but no doubt will make all right again when we get through this channel of ground. Lode in the present end will yield ½ ton of copper ore per fathom. We have suspended the sinking in the bottom of this level as we cannot work it to advantage until this level is driven some little distance from this point. The lode in back of this level will yield 2 tons of rich ore per fathom.

WEST CREBOR.—J. Andrews, March 15: The shaftmen are at present engaged putting in skip-road, which will be completed to the bottom of the shaft 10½ fms. below the 30 fm. level in a week from this time, when the sinking of the shaft will be resumed, and hope to get deep enough for a 50 fm. level in three months from this time.

WEST CRAVEN MOOR.—D. Williams, March 16: The Blackhill adit level has been driven during the past month 11 ft.; the lode in the end becomes more compact and promising for the production of lead ore as we approach the ore-bearing ground wrought in the 20 and 30 fm. levels above. A stope west of the new Blackhill shaft, under Ashworth's workings, in a lode 3 ft. wide, and worth 20 cwts. of lead ore per fathom; wrought at 90s. per ton of dressed ore. A stope east of shaft, in a lode 2 ft. wide, and worth 11 cwts. of lead ore per fathom; wrought at 90s. per fathom of dressed ore. The south-west cross-cut, from the 20, east of new west shaft, has been extended during the month 4 fms. 2 ft., and is now 30 fms. 4 ft. from the level; the improved appearance of the end here indicates that we are close to the lode. A stope below the 20, at new east shaft, in a lode 2 ft. wide, worth 18 cwts. of lead ore per fathom. We have weighed off a parcel of lead, and are daily carting ore to the mill towards another smelt

WEST GODOLPHIN.—T. Hodge, F. Hodge, March 13: In the 80 west end the lode looks very promising, showing rich stones of tin in the bottom of the end, but as yet do not reach the back. The 80 and 70 east ends are producing low price tinstone. The 70 west end produces stampling work. The 60 west is worth 9*l.* per fathom for tin and copper ore. There is no change in the 50 west. The 20 west end on Hope lode is worth 8*l.* per fathom. No other change.

WEST HOLWAY.—In the 110 we have cut into a large swallow, and expect when through it to find the lode much improved for the production of lead ore There is no change to note in the other bargains.—Ram Shaft: We continue to make good progress here, and from present appearances the lode must be close at hand. We are busy preparing another parcel of lead to be sold next week.

WEST KITTY.—Wm. Vivian, March 16: There is no change to notice in the mine since last week. A full report will be given at the meeting on the 22nd.

WEST LISBURNE.—Wm. Northey, March 15: I am pleased to say that good progress has been made in driving the mine. The 22 fms. of pumps which were used as a drop lift to drain the mine have been drawn to surface. We are busily engaged in raising the shaft collar and completing skip-road, to enable us to draw the stuff from the mine. Messrs. Williams and Metcalf are loading the 45 ft. pumping wheel on trucks at Aberystwith, which will be forwarded and erected without delay. The engine and pitwork are doing good duty and working well.

WEST PATELEY BRIDGE.—David Williams, March 16: The lode in the 58 north-west is 2 ft. wide, composed of gossan, li nespar, and barytes, intermixed with patches of lead ore. The winze below the level will be down to the depth required on Saturday next, when we shall drive both ways upon the lode to prove its value. Other points without change.

WEST POLBREEN.—Wm. Vivian, March 16: There is no change to notice in the mine since last report. A full report will be given at the meeting on the 23rd.

WEST PHŒNIX.—R. Gluyas, March 16: Since the meeting of the above mine we have completed cross-cutting the lode at the 32 east, and find it to be 12 ft. wide, producing saving work; we have now resumed driving the same level by the side of the lode, by six men, which we shall continue for 20 fathoms further, when we shall cross-cut it again; at this point we shall be near the old men's workings, where we have good reasons the result will be good. The western end is driven by four men; this end is only 4 fms. from shaft, being suspended while the plat was being cut; we shall continue driving here a few fathoms further, when we shall cross cut the lode. The shaft is down 4 fathoms under the 32, being sunk by nine men in a very congenial strata. All other operations going on satisfactory

WEST VOR AND LEEDS.—S. Harris, March 16: In the adit level driving east of cross-cut, on the Sozen lode, which is 5 ft. wide, with tin dissemnated throughout with a branch of peach in the south wall 9 in. wide—good looking tinstuff.

WEST WHEAL TOLGUS.—John Gilbert, March 16: Richard's Shaft: The lode in the 105 west of shaft is 6 ft wide, and yielding 2½ tons of ore per fathom. Although there is a little falling off in the value of the lode we think it is only temporary, and that it will improve again very soon. The lode in the rise in the back of this level is 3 ft. wide, and yielding some saving work for copper ore. The stope in the back of this level is still yielding 2½ tons of ore per fathom. There is no change in the 95 cross-cut driving north of shaft. In the 85 west of shaft the lode is 2 ft. wide, and yielding occasional stones of copper ore, and letting out a little more water. We shall sample on Tuesday next about 150 tons of copper ore.

WHEAL BOYS.—W. T. White, March 15: The men are making all possible progess in clearing the adit level, south of Good Wheal Fortune shaft, and hope soon to complete it. The lode in the 50, driving east of the cross-cut, is improving, and has every appearance of entering on a good run of ground; the ore is of a good quality, and is very rich in its nature. We have commenced to sink in the bottom of this level west, where we are breaking some good ore. We intend dressing what we have broken, and make it marketable as soon as possible. I consider the prospects of the mine good.

WHEAL COATES.—W. Vivian, March 16: In the 80 cross-cut, driving south of engine-shaft, we are pushing on with all practical speed to intersect the Wheal Kitty flat lode. In the 80, driving west, the south part of the lode is worth 10*l.* per fathom for tin. In the 70, driving west, the lode is large, producing a little tin, but not to value. In the 60, driving east, the lode is worth 10*l.* per fathom, with every appearance of a further improvement. Our tribute pitches are producing better quality tinstuff than the stopes did when worked on tutwork, by reason of the men being more careful in not breaking so much of the country rock.

WHEAL CREBOR.—G. Rowe, H. Phillips, March 14: There is no change in the general appearance of the mine throughout the various points in operation to call for any particular remarks of change since the statements given at the general meeting on Thursday last. The principal work in every department is progressing very satisfactorily, and the mine looking well.

WHEAL FORTUNE.—R. W. Dowling, C. W. Philp, March 14: During the past week the men engaged on the Harrowbarrow lode have been uncovering the same previous to taking it down. The concentration works are now thoroughly dry and fit to blast, which we shall commence at once to do.

WHEAL GEORGE.—C. Kneebone, March 16: The tunnel was communicated early on Tuesday morning, and we shall have the tramway to mills laid and ballasted by Tuesday next. The disintegrator is in place, only waiting belting, &c., to be ready to run, carpenters and masons are putting in flooring, concrete bottoms, &c., and everything will be quite ready so far as we are concerned here to run the machinery as proposed on Saturday, the 25th inst. I should, however, state that the bad weather a fortnight since retarded our progress with the kilns, and although we hope to get in the flue and plates, the chimney will not be finished for some two or three weeks; this, however, will not materially interfere with our running the machinery on the 25th.

WHEAL GRENVILLE.—T. Hodge, March 14: In the 190 east end I think we have reached the north wall of the lode, which is 14 ft. wide, producing stamping work. In the 178 east end the part of the lode carried is worth 9*l.* per fathom; the end is letting out much water. The winze sinking below the 165 is without any change to notice; the part of the lode carried is worth 20*l.* per fathom. The 165 east end is worth 12*l.* per fathom. Hill's winze below the 150 is worth 13*l.* per fathom. The lode in the 150 east end is worth 18*l.* per fathom. No other change; the stopes are turning out much as usual.

WHEAL PEEVOR.—Wm. T. White, T. C. King, March 15: We do not think it necessary to send out a full report this week, as our meeting is to be held on Tuesday next, March 21, when a full account of all operations and valuations, with their prospects, will be given.

WHEAL JANE.—J. Reed, March 15: Setting Report: Great Flat Lode: The 60 cross-cut to drive north, by six men, at 12*l.* per fm.; the north part of lode still contains mundic, with prian heads and occasional stones of tin. The ground is more favourable for driving, and fair progress is being made. The deep adit cross-cut to drive north, by four men, at 17*l.* per fathom; there is no change to notice in this driving since my last report. No. 1 stope in the back of deep adit level west from cross-cut, to six men, at 7*l.* 10s. per cubic fathom; worth for tin, 10*l.* 10s. per fathom. No. 2 stope in back of deep adit, to six men, at 7*l.* 10s. per fathom; worth for tin, 20*l.* per fathom.—Ready Money Lode: The deep adit level to drive west from No. 2 cross-cut, by four men, at 7*l.* per fathom; lode 3 ft. wide, worth for tin 9*l.* per fathom. No. 1 stope east from cross-cut and rise, to six men, at 3*l.* 3s. per fathom; lode 5 ft. wide, and worth for tin 20*l.* per fathom. No. 2 stope west from cross-cut and rise, to six men, at 3*l.* 10s. per fathom; lode 3½ ft. wide, worth for tin 10*l.* per fathom. The 16 to drive south from Gilbert's shaft, towards the Ready Money lode, by four men, at 6*l.* 10s. per fathom; from the appearance of the ground I think we are within a short distance of the lode On the whole, the mine has improved within the past month. The pulverisers are almost completed, and will be at work in a fortnight, which will assist to increase our returns. We are dropping the drawing lift to the 70, which we hope to reach some time next week, and where, we are informed by the former agents, there is a large section of tin ground available for tributers. The tributers during the last month earned good wages. Our last tin sale realised 422*l.* 3s. for a fortnight.

WHEAL JAGWELL.—J. Tregoning, March 11: Setting Report. The new shaft to secure from 5½ fms. below the 40 to 50, to clear all stuff, cut plat, and fix plat collar; set at 10*l.* The 40, east of new shaft, to drive by four men and one boy, at 60s. per fathom. The lode in this end is of a highly promising character, and although not rich throughout has produced some excellent copper ore during the past month. The 27, east of engine-shaft, to drive by two men and one boy, at 27s. 6d. per fathom. Here the lode, which has been cut off by a cross-course and thrown southward about 6 fms., is expected to be met with in about a fortnight from this date, and found productive as to the west of it. The 27 to drive east of new shaft, by two men, at 27s. 6*d.* per fathom; lode still in unsettled ground, but from indications is likely to improve. The 60 to drive east of engine-shaft, by four men and two boys, at 60s. per fathom. This end produces a little copper ore, and without doubt will improve very materially on meeting with the bunch of ore gone down in the bottom of the 50, a few fathoms in advance of the present end. Preparations are being made to drive the 40, west of the engine-shaft. A stope below the 50, east of cross-course, to two men and one boy, at 25s. per fathom, producing 1½ ton of copper ore per fathom. Two stopes in back of 40, west of cross-course, by four men and two boys, at 20s. per fathom; worth 2 tons per fathom of good quality copper ore. The 127 tons (computed) of copper ore sampled on the 21st ult. has been sold for 340*l.*

YEOLAND CONSOLS.—Joel Manley, March 15: We are using all dispatch to get through the run in the shallow adit, which we hope to accomplish in a few days. The lode in the deep adit level still continues to yield rich tinstuff, which is fast accumulating on the floors awaiting the erection of machinery. I am satisfied that our opinions as to the productiveness of this mine will be fully realised. The contractors have all signed their contracts, and Messrs. Toop and Stevens are pushing on the lobby with a good staff of men. Messrs. Moses and Dockett start to-morrow for the count-house, leat, &c.

THE VAN MINING COMPANY.

The following report from the directors will be read at the meeting of shareholders on Thursday:—

The directors have to report that the accounts for the year ended Dec. 31, 1881, duly vouched and audited, show a serious falling off in profits compared with the previous year, arising from the very low prices obtained for the produce of the mine, the average price realised for lead ore being only 10*l.* 16s. 11¼d. per ton, against 12*l.* 0s. 5d. in 1880, and for blende ore 2*l.* 8s. 7¾d. per ton, against 2*l.* 15s. 1½d. per ton in 1880. The sales of lead ore were 2600 tons; at an average price of 10*l.* 16s. 11¼d. per ton amount to 28,201*l.* 7s. 6d. The sales of blende ores were 1414 tons; at an average price of 2*l.* 8s. 7¾d. per ton amount to 3227*l.* 12s. 5d. Received for interest and discount, 98*l.* 6s. 3d.; received for rent of cottages, 65*l.* 4s. 3d.; making the gross receipts 31,592*l.* 10s. 6d. The gross expenditure for labour, merchants' bills, royalty, rents, rates, income tax, office expenses, and all other charges amount to 27,774*l.* 15s. 1d., leaving a profit of 3817*l.* 15s. 5d. Two dividends have been paid amounting to 3750*l.*, leaving a balance of 67*l.* 15s. 5d., which is placed to the credit of reserve, and that fund now stands at 4264*l.* 10s. 8d. The directors have surrendered the lease of the mine, and taken a new one from Michaelmas last for 14 years. Mr. Frederick Lokes Slous being ordered abroad for his health has resigned his seat at the board. The manager will be present at the meeting, with a full report upon the mine for the information or the shareholders. Mr. Julius Alington retires by rotation from the board, and offers himself for re-election. Mr. H. J. Whaley, the auditor, also retires, and offers himself for re-election.

From Mr. JOHN B. REYNOLDS.—The week has not been characterised by any feature calling for special notice. The markets have been exceedingly quiet. Excepting a capital demand for East Pools, Dolcoaths, and West Kitty, the mining market has almost been devoid of interest. It is, however, satisfactory to notice an inquiry for shares of a speculative character, to which speculators are attracted by the nominal quotations; and very likely this inquiry will result in heavy purchases and satisfactory profits. That shares should not now be in demand is no indication that they lack merit; indeed, in many instances operators are purposely standing aloof and discouraging the outside public from disturbing the natural course of events. As a rule these operators for the rise are satisfied before the public enter the field, and it will be no fault of theirs if they do not again succeed. It is not surprising that investors are astir, and they will have themselves to blame if they are again forestalled by market men.

It seems to many very surprising that Wheal Hony and Trelawny should be noticed so little. The energy and common sense of the management here is, however, beyond praise, and those who have such confidence in the property should take care to support the market for the company's shares, bearing in mind that they are under the Limited Liability Act. These remarks also apply to East Wheal Rose, in view of the possibility of further financial requirements. It is affirmed—and we are by no means prepared to question the accuracy of the view taken—that these mines are destined to enrich those who cling to them. We make these remarks the more cheerfully, as we are in no way connected with either of these undertakings.

Devon Friendships have changed hands at very low quotations, and Trevaunance shares have been wanted. Buyers of the latter appear to hope that they may be purchased cheaper after a time, but persons lose sight of the fact of Trevaunance United being the result of a very important amalgamation, and that the company is already influential and strong. Moreover, we venture to think that concerning these mines a great deal of ignorance exists, which will be readily dispelled before the market or the public are ready for enlightenment. There are numerous low priced shares which should in our opinion be immediately purchased, but investors should be guided by other information than that obtainable on the London markets, especially where Cornish mines are concerned. Decidedly the most satisfactory fact we have to note is the steady condition of the tin market. The prophets of evil are all wrong, and we are pleased that our anticipations, and those of others still better informed, have proved so accurate.

With these facts before us we cannot but think that the depression on the market for tin shares has been for an object grossly exaggerated, and a very considerable rebound would not at all surprise us. Perhaps our correspondents who have been asking for more definite information as to the mines which should be bought, and the probable course of events in the immediate future, will consider these general ideas as the answers to their communications. We had almost forgotten to mention that Wheal Coates gives evidence of being a capital property, and we think the shareholders may reckon on a first-rate meeting in about two months' time. We calculate on good returns, and a heavy credit balance in the bankers' hands. The buyers of New Kitty have to learn that a quotation is one thing, but that business at such quotation is quite another. West Kittys were at 40s. about two years ago. The coming meetings of shareholders in some of the St. Agnes mines will probably disclose facts not generally known, and these facts we will not further anticipate. We heartily congratulate investors in our leading mines, however, upon the prospects of the year 1882 as far as they are concerned.

HOLLOWAY'S PILLS—WRONGS MADE RIGHT.—Every day that any bodily suffering is permitted to continue renders it more certain to become chronic or dangerous. Holloway's purifying, cooling, and strengthening pills are well adapted for any irregularity of the human body, and should be taken when the stomach is disordered, the liver deranged, the kidneys inactive, the bowels torpid, or the brain muddled. With this medicine every invalid can cure himself, and those who are weak and infirm through imperfect digestion may make themselves strong and stout by Holloway's excellent pills. A few doses of them usually mitigate the most painful symptoms caused by undigested food, from which they thoroughly free the alimentary canal, and completely restore its natural power and action.

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OLD METALS of EVERY DESCRIPTION PURCHASED for CASH.

The Mining Market: Prices of Metals, Ores, &c

METAL MARKET—LONDON, MARCH 17, 1882.

IRON.	£ s. d.	£ s. d.
Pig, GMB, f.o.b., Clyde...	2 9 3-	—
,, Scotch, ail No. 1 ...	2 9 9-	2 10 0
Bars, Welsh, f.o.b. Wales	6 0 0-	6 2 6
,, ,, in London.	6 10 0-	6 12 6
,, Stafford., ,,	7 5 0-	7 7 6
,, in Tyne or Tees ...	6 5 0-	—
,, Swedish, London...	10 0 0-	—
Rails, Welsh, at works ..	6 0 0-	6 2 6
Sheets, Staff., in London	9 0 0-	—
Plates, ship, in London .	9 5 0-	—
Hoops, Staff., ...	7 15 0-	—
Nail rods, Staff., in Lon.	7 5 0-	7 15 0
STEEL.		
English, spring	12 0 0-18	0 0
,, cast	30 0 0-45	0 0
Swedish, keg	15 0 0-	—
,, fag. ham.	15 10 0-	—
LEAD.		
English, pig, common..	14 7 6-14	10 0
,, ,, L.B.	14 12 6-14	17 6
,, ,, W.B.	15 0 0-15	5 0
,, sheet and bar..	15 7 6-	—
,, pipe	15 15 0-	—
,, red	17 10 0-	—
,, white	21 10 0-23	0 0
,, patent shot ...	17 10 0-	—
Spanish	14 2 6-14	5 0
NICKEL.		
Metal, per cwt.	15 0 0-18	0 0
Ore, 10 per cent. per ton.	20 0 0-25	0 0
QUICKSILVER.		
Flasks, 75 lbs., war.	5 17 6-	—
SPELTER.		
Silesian	17 0 0-17	5 0
English, Swansea	18 0 0-	—
Sheet zinc	21 15 0-22	0 0

TIN.	£ s. d.	£ s. d.
English, ingot, f.o.b...	113 0 0-114	0 0
,, bars ,, ...	114 0 0-115	0 0
,, refined	115 0 0-116	0 0
Australian	110 15 0-111	0 0
Banca .....nom.	— —	—
Straits	110 15 0-111	0 0
COPPER.		
Tough cake and ingot.	68 0 0-	—
Best selected	71 0 0-	—
Sheets and sheathing.	76 0 0- 77	0 0
Flat Bottoms	79 0 0- 80	0 0
Wallaroo	70 0 0-	—
Burra, or P.C.C.....	69 0 0-	—
Other brands ... nom.	66 0 0- 67	0 0
Chili bars, g.o.b.	64 17 6-	—
PHOSPHOR BRONZE.		
Alloys I., II., III., and IV.	... £125	0 0
,, VI. and VII.	140	0 0
,, XI., Spl. bearing metal	117	0 0
BRASS.		
Wire	7½d.	—
Tubes	9¼	—
Sheets	8	—
Yel. met. sheath. & sheets	6¼d.-6½	

TIN-PLATES.*	per box.	
Charcoal, 1st quality ...	1 1 0-	1 2 0
,, 2nd quality ...	0 18 0-	1 0 0
Coke, 1st quality	0 18 0-	0 19 0
,, 2nd quality	0 16 0-	0 17 0
Black.....per ton	15 10 0-	—
Canada, Staff. or Gla. at Liverpool	12 0 0-	—
Black Taggers, 450 of 14 × 10	30 0 0-	—

* At the works, 1s. to 1s. 6d. per box less for ordinary; 10s. per ton less for Canada; IX 6s. per box more than IC quoted above, and add 8s. for each X. Terne-plates 2s. per box below tin-plates of similar brands.

REMARKS.—Our markets this week have for the most part been good, a fairly strong tone has generally prevailed, and prices here and there have been advanced, while more disposition appears to exist amongst buyers to pay the dearer rates than what there was to place orders at the reduced prices ruling a week ago. It is satisfactory to note that the improvement, slight as it may be, is not confined to any one particular metal, but that all the leading markets for the various metals show extra cheerfulness, increased firmness, and the transacting of a larger business, and this gives a better chance and more room for expectation that the other metals which have not yet participated in the present improvement may not unlikely also shortly recover. It may be urged that the present recovery is not as yet sufficiently pronounced to enable operators to foresee with any amount of certainty the immediate future course of prices, and, therefore, transactions ought only to be entered into with considerable caution. Caution is, of course, at all times advisable, but it should not be forgotten that hesitation frequently proves fatal, and more particularly when so many favourable events are rolling onward, giving more and more support to the markets, and, like the inflowing tide, sweeping away all slight barricades which are brought forward in the hope of checking its progressive course. As we showed last week, there is much to stimulate business and but little to impede it, there is much to anticipate that the metal trade is on the eve of prosperity, and also great reason to look for the extension and development of the general demand, and although some few circumstances of a more or less adverse character may in a measure check speculative business, and thus prevent prices from making very rapid strides in an upward direction, yet there appears nothing to interfere with regular trade, and as the season advances so we may expect renewed activity in the manufacturing centres.

There are now for the most part cheap prices ruling to encourage buying, a low rate of money to give vitality to enterprise, a strong disposition amongst operators to effect purchases and thus give tone to the markets, and a confidential feeling existing in the trade, whereby transactions are entered into with greater freedom. It is true that at times this week, after prices have been advanced, there has been more selling, in which way prices have been prevented from further rising day by day, or, in other words, the progress has not been in one continuous upward course. There have been reactions, but which is to be attributed more to the taking of profits than to any other cause. Operators in our markets seldom hold out for long profits, they prefer to buy and sell, repurchase and re-sell as prices advance, and thereby, although necessitating the transaction of an increased business, nevertheless diminishes the risks to a considerable extent; and while such sales prevent prices from being enhanced too speedily, they also give another opportunity to hesitating buyers to secure their wants without having to pay unreasonable figures. It should also be remembered that the fluctuations which have taken place have been solely in those metals where speculation exists, a feature which points very strongly to the fact that there is no adverse event in ordinary trade, and it may be fairly assumed that the rise which was effected in the leading metals at the early part of the week was the result of the combination of numerous favourable circumstances, which need not here be recapitulated, while when quotations have taken a downard turn it has been probably caused by operators securing the profits offered by the advanced rates.

COPPER.—This market was very strong at the early part of the week, and prices showed an advancing tendency for the raw material, an increased business being transacted. The Chili charters were announced on Monday as 1900 tons for the first half of the present month, consisting of 950 tons bars and ingots, 350 tons furnace material for England, and 600 tons bars for the Continent. This may, perhaps, have given some slight stimulus to the speculative demand, and, in a measure, the extra tone may have been attributed to this cause; but more likely the chief reason of the advance was the fact that holders began to see they were submitting to seemingly heavy sacrifices, and, consequently, the rebound being a little sharp formed no matter of surprise. During the first three days of the week the price of Chili bars was tolerably strong, but yesterday there was more disposition to sell, perhaps owing to manufactured being procurable upon somewhat easier terms. This it is to be hoped will cause an improvement in the demand, and will be the means of stimulating buying and induce indentors to send forward more orders. The price is now a very moderate one, and ought to encourage buying, and more particularly as the demand of late has been rather slack, while increased orders may also be looked for from India and other colonies as the shipping season advances. The bi-monthly returns of Chili produce show the imports during the first half of the present month to have been 3090 tons, against 535 tons for the same time of last year. The deliveries were 1679 tons, against 927 tons for the similar period, while the stock in first and second hands in Liverpool and Swansea shows an increase of 1411 tons, amounting to 25,932 tons on the 15th inst., against 24,521 tons on the 28th ult. These statistics can hardly be reckoned satisfactory, and they, too, may have formed some check to the advance of prices; and, therefore, there is some reason to which the slight reaction can be attributed, although at the same time the prospects of the trade are not thereby interfered with, but rather the reduced rates of manufactured should give renewed activity to the demand, whereby orders for the raw material would be also augmented to at least a proportionate extent.

IRON.—This market has remained steady as regards manufactured, a moderate business only having been carried through, and prices for some descriptions have displayed symptoms of ease, but at the same time there have not been any material concessions made. Although there is no very large business doing, yet prices show no signs of receding to any great extent, because they are said to only just cover the cost of manufacture; hence buyers will doubtless have to continue to pay about present rates in order to secure their iron. With regard to the raw material, if reference be made to the following returns from Glasgow it will be seen that there has been an active business doing in Scotch pigs, the market being probably greatly supported by the continuance of favourable shipments and by slightly reduced stocks in public stores, signifying that the requirements of the trade have at last exceeded the supply, and although only to a slight extent, yet enough to encourage buying to some extent, and thus give more tone to the market. The advices from Middlesborough will also be found to be favourable, and they show a sensible reduction in the public stocks, and while buying has been more spirited, increased firmness has been visible in quotations. In the Staffordshire districts, however, it will be seen that there is less strength in the market, although the tone is favourably influenced by the better reports from the north of England and Scotland, while in Wales business is said to be tolerably good. Taking these various returns into consideration, it will be found that the trade on the whole is still in a moderately good condition; it is true not quite so brisk as a short time back, but nevertheless a sound business appears to be doing; and notwithstanding that the fluctuations in Scotch pigs may testify to speculation in that particular branch of the trade, yet what is doing in manufactured appears almost entirely for legitimate account.

The Glasgow warrant market has at times shown symptoms of briskness, and a very fair business has been doing. On Monday there was a steady demand for warrants, and prices in the course of the day advanced from 48s. 3d. to 48s. 7½d., closing at the best, while on Tuesday a larger business was doing, and the prices continued to advance to 49s. 2d., further improving on Wednesday to 49s. 6d., but receded yesterday again to 48s. 10½d., and closes to-day at 49s. 3d. cash. The shipments last week were again good, and amounted to 13,237 tons, against 8261 tons for the same week of last year, or an increase of 5026 tons, and which makes the total shipments for the whole of this year 105,251 tons, against 90,733 tons for the same time of last year, and 145,561 tons for the similar period of 1880. The number of furnaces in blast remains at 108, while the stock in public stores shows another slight decrease of 155 tons, and is now estimated at 630,311 tons, against 630,466 tons a week ago. The imports of Middlesbrough pig iron into Grangemouth last week were 4790 tons, against 6049 tons for the same week of last year, being a decrease of 1259 tons, and which makes a total increase for the whole of this year, compared with last, of 6165 tons. The Cleveland market is reported as very firm and animated, there being a sensible increase in the demand and a large enquiry prevailing for the raw material. Makers are quoting 43s. 6d. for No. 3, and show little disposition to sell at less, although from second hands quotations are 6d. less, No. 4 ruling at the usual difference. One of the principal supports to the market is the good shipments, those for the first half of the month being over 44,000 tons pigs, while another satisfactory feature is a further reduction in the stock of no less than 16,010 tons, while the stock is now said to be 169,556 tons. The manufactured trade keeps tolerably firm, and ship-plates are offering at 7*l.* 5s., and bars and angles at 6*l.* 10s. per ton.

Advices from Wolverhampton report that the market there is a little stronger, but prices show no quotable advance. The common qualities of Staffordshire pigs rule chiefly from 40s. to 45s., and part mine sorts at 52s. 6d. to 57s. 6d., while Northampton and Derbyshire makes are offering from 50s. to 52s. 6d. In finished iron there is but little activity, the various works being in want of specifications. Hoops rule at about 7*l.* 5s., and at about which figure marked bars are also to be bought, while common bars are quoted at 6*l.* 15s. per ton. Upon the Birmingham market pigs are said to be a little firmer, whereas manufactured on the other hand is easier, although only to a slight extent. The demand for sheets remains very quiet, and prices have fallen to 8*l.* for ordinary singles. Business is limited in common bars, which are to be bought at 6*l.* 10s., although the general quotation is 6*l.* 15s. to 6*l.* 17s. 6d. per ton. Activity is still said to exist in the trade at Sheffield, especially for shipbuilding material, while prices have undergone hardly any change, and scarcely any alteration. As reported from the Welsh districts, advices from New York of the 10th inst. show that the American trade is without any important alteration, although with regard to Scotch pigs, Coltness is quoted 4s. lower, and now rules at $26·50. Other brands are without change. No 1 Gartsherrie is quoted at $26, Glengarnoch is $25·50. Eglinton remains at $23·50. Hematite pigs are held for $25, while scrap and old rails are 2s. lower, and both rule at $31.

TIN.—This market, after having opened with a fairly strong tone, has since given way to some extent, but at the same time throughout the week there has continued to be a fairly active business transacted; and, whether the course of prices has been upward or downward, a cheerful feeling has for the most part prevailed, and transactions have been upon an extensive scale. One of the most adverse features, perhaps, in this market at the present time, is the continued quietude in the demand for tin-plates, which necessarily produces an injurious effect upon the consumptive enquiry, which also in its turn to some extent diminishes the demand for speculation, and causes a feeling of some indecision to prevail amongst operators. Hence, it is easy to understand the fluctuating character of the market, while prices are greatly supported by the strong speculative interest which exists in the maintenance of the market, and as "bull" operators have such a very firm hold of the market it appears very questionable whether prices will give way materially, in spite of the dulness in the regular demand. One thing is certain, that prices will not recede without some great effort being put forward to maintain them; and if the future can in any way be judged from the past, when holders have upheld the market with apparent ease there is no reason to expect that any serious reaction will ensue.

SPELTER is firmer, and some good business has been done. We quote ordinaries at 17*l.* to 17*l.* 5s., and specials at 17*l.* 5s. to 17*l.* 10s.

LEAD is quiet at 14*l.* 2s. 6d. to 14*l.* 5s. for Spanish, and 14*l.* 7s. 6d. to 14*l.* 10s. for English.

STEEL remains steady and without change.

TIN-PLATES are difficult of sale, and although prices are easier, yet they are without any great change.

QUICKSILVER.—The importers of Spanish have at last given way and accepted 5*l.* 17s. 6d. This reduction has led to fair sales for export.

In the MINING SHARE MARKET the dealers have been chiefly occupied in the settlement of the fortnightly account. In the early part of the week the market was dull and depressed, with a general absence of speculation; but towards the close tin mines became firmer, and one or two advanced in price considerably. The principal demand has been for West Setons, which have risen 10*l.* per share; East Pool have also risen 10*l.* Wheal Peevor, Wheal Crebor, Wheal Agar, East Blue Hills, Parys Copper, Bratsberg, Gunnislake (Clitters), Sortridge, West Kitty, Roman Gravels, and a few others.

TIN.—This metal remains about the same, and although the standards for ore were reduced 2*l.* late last week, the reduction was not general, and at some smelting houses the old price was paid. In shares there has been rather more doing. Blue Hills, 1 to 1¼; Cook's Kitchen, 32 to 33; Dolcoath, 80 to 82½; East Blue Hills, 11s. to 13s.; East Pool, 57½ to 60; East Lovell, 1 to 1¼; Killifreth, 2¼ to 2⅜; New Kitty, 1¼ to 2; Mount Carbis, 2¼ to 3; South Condurrow, 9 to 9½; South Frances, 14 to 15; Tincroft, 14 to 15. Carn Brea has been flat, and receded to 17, 18; at the meeting, which seems to have caused some disappointment, the accounts showed a profit of only 302*l.* on four months' working, and a credit balance of 403*l.* The costs of these four months were in excess of the last, and the returns much less. The tin sold realised 15,425*l.*; copper, 135*l.*; arsenic, 129*l.*; total credits, 15,752*l.* The costs amounted to 15,449*l.*, including labour, 10,823*l.*; merchants, 3,480*l.*; carriage, 255*l.*; dues, 660*l.*

West Basset, 13 to 14; West Frances, 11 to 11¼; West Godolphin, 2 to 2½; West Kitty, 8 to 8¼; West Peevor, 13½ to 14; West Phœnix, 1 to 1¼; Wheal Agar, 15½ to 16; Wheal Grenville, 10¾ to 11¼; Wheal Jane, 1¼ to 1½; Wheal Jewell, ⅜ to ½; Wheal Kitty (St. Agnes), 1⅛ to 1⅜. Wheal Peevors have been in fair request and advanced to 12, 13; the lode in the 90 west is reported worth 20*l.* per fathom, and the prospects of the mine improving. Drakewalls, ⅜ to ½; Kit-Hill, ⅜ to ½. At North Busy meeting a call of 5s. per share was made. The loss shown was 1216*l.*, and a balance against the mine of 1467*l.* 75 shares were relinquished. Polrose, ⅛ to ¾.

COPPER.—With one or two exceptions, such as West Seton, Wheal Crebor, West Crebor, Bedford, Parys Copper, &c., there is very little doing in copper mines, and prices are mostly nominal. Bedford United, 1½ to 1¾; Carnarvon Copper, ⅝ to ¾; Devon Great Consols, 7 to 7½; Devon United, ⅜ to ½; South Devon United, ½ to 1⅛; East Caradon, ⅛ to ¼; Gunnislake (Clitters), 2¾ to 3; Hingston Down, ¾ to 1; Mellanear, 4½ to 4¾; Marke Valley, ½ to ¾; Moua, 6 to 7; New West Caradon, 2s. 6d. to 3s. 6d. Parys shares have been more enquired for at ½ to ⅝. Prince of Wales, 9s. to 11s.; the bottom levels are improving in appearance. West Caradon, ⅜ to ⅝; West Crebor, 4s. to 6s. West Setons have further advanced to 40, 45. West Tolgus, 18 to 20. Wheal Crebors have been firmer, and more dealt in, and leave off 2⅛ to 2½; no change has taken place in the mine since the meeting. Devon Friendship, 6s. to 8s.; the 30 ends east and west are improving. Sortridge, 6s. to 8s.; there is a very good report from the mine this week, and a valuable discovery of tin. Gawton, 10s. to 15s.

LEAD.—No particular change here, but spelter has improved 10s. per ton. Shares in lead mines have been very little dealt in, and prices are nominal. Vans are quoted 7 to 7½; Great Laxey, 17 to 18; Roman Gravels, 9 to 9½. Tankerville Consols, ¼ to ⅜; they have sampled 20 tons of lead ore from Pennerley. East Roman Gravels, ⅜ to ½; they have sold this week 40 tons of lead ore at 9*l.* 14s. 6d. (389*l.*). Derwent, 1 to 1⅛; Bwlch United, 1½ to 2; Goddard's Lead, 1 to 1⅛; D'Eresby Mountain, 1 to 2. Great Holway, 5 to 5½; the 95, driving north, is worth 3 tons of lead ore per fathom. Pennant, 4½ to 5; West Holway, 1 to 1½; Leadhills, 2⅛ to 2⅜; North D'Eresby, ½ to ¾. North Herodsfoot, ¼ to ½; this mine is looking more promising. Pandora, ⅜ to ⅝; South Darren, 1 to 1¼; Van Consols and Glyn, ⅜ to ½; West Lisburne, 1⅛ to 1⅜; Crosswood, ½ to 1. Frongoch, 2 to 3; this mine has sampled 100 tons of lead ore. Grogwinion, 1 to 1¼; the sampling here is 50 tons of lead ore. Goginan, 1¼ to 1⅜; Ystwith, ½ to ¾; Coed-y-fedw, 1 to 1½; Sinclair, 1 to 1½; Gwydyr Amalgamated, ½ to ¾.

FOREIGN MINES.—Akankoo, ⅛ to ⅜; Broadway, 5¾ to 6; Canadian Copper and Sulphur, 1 to 1¼; Cape of Good Hope, 3 to 3½; Devala Moyar, ⅛ to 1½; Indian Consolidated, ⅜ to ½; Indian Glenrock, ⅜ to 1; Indian Phœnix, ⅜ to ½; Indian Trevelyan, ½ to ⅝; La Plata, 2 to 2½; at the meeting in New York, yesterday, the usual monthly dividend of 12 per cent. per annum was declared. The month's output has been 18,900 ozs. of silver and 117 tons of lead. The value of the consignment was 6520*l.* Mysore, ⅞ to 1⅛; Mysore Reef, ⅛ to ⅜; Nouveau Monde, ⅛ to ⅜; Potosi, ⅛ to ⅞; Rhodes Reef, ⅛ to ⅜; South-East Wynaad, 1⅜ to 1⅝; South Indian, ⅜ to 1; Tocopilla, ⅜ to ½; Almada, ⅛ to ⅜; Brazillian Gold, 1 to 1⅛; Bratsberg, 1¼ to 1⅜; according to the manager's report, received this week, the various ends and stopes are valued in the aggregate at nearly 350*l.* per fathom, and there is about 5000*l.* worth of ore in the dressing floors. The first shipment, 200 tons, will be made soon after Easter. Cape Copper, 48 to 50. Colorado, 1⅛ to 1⅜; Copiapo, 2⅛ to 3⅛; Don Pedro, ⅛ to ⅜; Eberhardt and Aurora, ⅜ to ⅝; English-Australian, 7s. 6d. to 12s. 6d.; Frontino, 2¾ to 3; New Quebrada, 4 to 4¼; Panulcillo, 5½ to 6; Richmond, 11 to 11½; Ruby, 3⅜ to 3⅝; Gold Hill, 1 to 1⅛; New Zealand Kapanga, ⅛ to ⅜; Corporation of South Australian Copper, 1⅛ to 1⅜; Colombian Hydraulic, 8s. to 10s.; Tolima, 3½ to 4. Organos, 1 to 1¼; the manager writes, under date Jan. 20, that the Constantia lode has been variable in size, but has continued rich, and some specimens of gossan give great results.

The Market for Mine Shares on the Stock Exchange has been irregular during the week and, as compared with former weeks, considerably less business has been done; but prices have remained without much alteration, and in a few isolated instances an advance has been established. The La Plata Mining and Smelting Company have announced their 31st consecutive monthly dividend. At a meeting of the board of directors held at the New York Office yesterday $20,000 was appropriated from the profit realised in February, to the payment on April 1 of a dividend of 10 c., or 5d. per share, equal to 12 per cent. per annum on the capital of the company. The smelting statement for week ending March 11 shows:—Ore purchased, 903 tons; ore smelted, 991 tons; silver produced, 18,900 ounces; lead produced, 117 tons; silver-lead bars consigned to refiners, 107 tons; and value of consignments, $31,300—equal to 6,320*l.*

A telegram from Cornwall this evening says: During the past week the Cornish mine share market was fairly animated for some shares. Chief amongst the advances have been East Pool and West Setons, whilst Agars and Wheal Peevors have been firmer. The tin standards remain unaltered. At Wheal Uny meeting, held yesterday, a loss of 1750*l.* was shown, and 8s. per share called up. At the meeting held to start Polcrebo Tin Mine, near Helston, a call of 5s. per share was made. Carn Brea meeting showed a profit of 302*l.* on 16 weeks' working, and a credit balance of 413*l.*; the purser stated that in his opinion the requirements for tin were increasing every day. Quotations:—Carn Brea, 18 to 18½; Cook's Kitchen, 31½ to 32; Dolcoath, 81¾ to 82½; East Pool, 58 to 59; South Crofty, 8½ to 8⅝; South Frances, 14¼ to 14⅜; Tincroft, 14½ to 15; West Peevor, 13½ to 14; West Seton, 44 to 46; Wheal Agar, 16 to 16½; Wheal Basset, 5 to 5½; Wheal Peevor, 12 to 12½; West Basset, 13½ to 14.

The Owen Vean and Tregurtha Downs Mines has been formed with a capital of 60,000*l.*, in shares of 1*l.* each, to purchase for 25,000*l.* (of which 8334*l.* is taken in cash and the remainder in fully paid shares) the licenses and grants of, and vigorously developing and working the extensive and valuable run of tin and copper lodes in the Owen Vean and Tregurtha Downs Mines, situate in the heart of one of the richest mining districts in Cornwall, the parishes of St. Hilary and Perranuthnoe, near Marazion. The prospectus, which will be found in another column, states that the productiveness of the district in which Owen Vean and Tregurtha Downs are situate has already been proved by the large returns of tin and copper ore made not only from the same lodes, but from the mines immediately surrounding. The Tregurtha Downs Mine is situated in killas, near to its junction with the granite, a stratum highly congenial for the production of mineral and of the easiest and cheapest description for sinking and driving.

Three of the principal tin lodes form a junction eastward and at the point of intersection there is but little doubt that large depotits of mineral will be met with. The workings hitherto have been very shallow, the greatest depth to which the engine-shaft has been sunk being only 60 fathoms. The Owen Vean sett immediately adjoins Tregurtha Downs on the west, the same lodes running through the sett and in the same congenial mineral-bearing geological formation. The deepest point reached in flat rod shaft is 80 fathoms, and a large amount of valuable work has been executed and is now available for this company. The tedious and costly dead work which must necessarily be done on any mine (and which in Owen Vean and Tregurtha Downs would require at least three years to accomplish) is already effected, and the mine is already opened so as to become productive as soon as the respective levels are drained.

Devon Great Consols, 7⅛ to 8; the next monthly sale of copper ore being an increased quantity—1028 tons—is expected to bring a much better price. The 160 west is looking promising for a good course of copper ore.

Devon Great United, ⅜ to ½; good progress is being made respecting the rock boring machinery.

Kit Hill Great Consols, ¾ to ⅞; there is a fine lode in the 62 west, producing good tin ore.

Drake Walls, ⅜ to ½; as will be seen by the manager's report in another column, satisfactory progress if being made both underground and at surface.

South Devon United, 1⅛ to 1⅜; it is reported that the mine is looking much better, and some important discovery is likely soon to take place. It is stated tnat the applications for the new capital have been satisfactory, and that the list will be shortly closed.

West Wheal Seton advanced to 40, 50, and in great demand in both the London and Cornish markets. The discovery made in Michell's shaft is said to be worth 100*l.* to 130*l.* per fathom for tin at least. This is one of the finest discoveries made in the Camborne or Dolcoath district for many years. There appears to be a strong feeling that these shares will shortly see 100 to 150 a share, and ultimately go to double this, at which they were once. History, it is said, repeats itself, and will, no doubt, do so again in this fine old and rich mine, both in price of shares and dividends. The dividends already paid amount to about 267,600*l.*

South Wheal Frances, 14⅜ to 15⅜; the mines continue to look well, and the next statement of accounts at the meeting of shareholders is expected to be very satisfactory.

Richmond, 11¼ to 11⅜; the usual telegram from the mines at Eureka, Nevada, states that the week's run was $25,000, with one furnace, from 497 tons of ore. During the week the refinery produced doré bars to the value of $25,000. The superintendent (Feb. 20) states that the 200 rise near shaft has been advanced 30 ft. Holed into bottom of Old Flat Chamber on Feb. 15 in high grade ore—looks well. The 600 north drift from west drift has been run 16 ft. in limestone—somewhat improved. The 700 north drift from winze from No. 13 chute has been run 9 ft. in limestone—no change. The 700 winze from south-west drift from north drift has been sunk 5 ft. in limestone—unfavourable, stopped on 20th, commenced drifting from bottom of winze. The 800 north drift from quartzite drift has been run 9 ft. in limestone—no change. The 800 south drift from chute from 700 level has been run 14 ft. in limestone—improved.

Ruby and Dunderberg, 3¼ to 3¾; the telegram this week advised that the late find of ore in the 700 ft. level of the Dunderberg Mine showed improvement, and that the ore body was widening. The weekly report from that mine indicates where the strike has no doubt taken place, and the progress in the works of the mines show good ore in more than one place.

In the Queen's Bench to-day an interesting case was heard before Mr. Justice Hawkins, wherein Mr. Grünebaum, a German cigar dealer, sought to recover 183*l* for cigars supplied to Mr. J. R. Ross, of Ashley, Carr, and Co., Draper's Gardens. It appears that negociations were opened for Grünebaum to supply Ross with a case of cigars in bond, Ross to have six month's credit and to deposit 200 East Florida Silver Lead Mining Company shares as collateral security. Grünebaum, having been advised that the shares were utterly worthless, declined the security a few days afterwards, and obtained a cheque for 50*l*. before he would deliver the dock warrant. The acceptance was given for the balance due, but dishonoured. Grünebaum contended that both the acceptance and the shares were to be held for the balance; Ross contending that when the 50*l*. was paid there was a new and verbal agreement, and the shares should have been returned. The learned judge directed the jury that there was really two distinct cases for the 50*l*. and the dishonoured bill Ross had received value in cigars, so that the verdict must be for the 183*l*. odd, with interest and costs. As to the other question the jury had to decide whether the new verbal agreement was made. This they affirmed, assessing the damages at one farthing for non-return, the solicitor of the company, Mr. Kimber, having deposed that the company had really never been *bonâ fide* formed, and that he had not been paid and could not recover even the 13*l*. he had paid out of his pocket for stamps on registration. The judge refused to allow any costs in connection with the second question, but said he would order the restoration of the 200 shares which were admitted to be at the present time absolutely worthless; he could see no objection to the delivery from Grünebaum to Ross in open court. As the jury had assessed the value of the shares at 50*l*. in case of non-return Ross objected to the learned judge's direction, because he declared that the certificates for 200 shares tendered were not the identical certificates which he lodged with Grünebaum, those deposited being in the name of Spargo, which was not the case with those offered for return. As it was demonstrated that the East Florida shares were not at all times valueless, it is difficult to understand what difference the particular numbers on the scrip can possibly make even to Mr. Ross.

The Great Western Railway of Canada shareholders have been forwarded a circular by Mr. William Abbott, of Tokenhouse-yard, in which he says: The announcement by this company of a dividend at the rate of only 1 per cent. per annum, against 3 per cent. at the corresponding date last year, has evidently occasioned much dissatisfaction, and many communications have been addressed to me urging the importance of a renewed effort being made to alter the policy of the board. Every argument which I put forward in 1879 in favour of fusion can now be urged with much greater force, as the past two years have afforded ample time to test the directors alternative policy of American alliances, with the result of demonstrating its utter worthlessness. For instance, a yearly increase of 400,000*l*. in traffic was promised to the Great Western shareholders as one of the rewards to follow their blind adoption of the agreement with the Wabash Company, but the receipts instead have shown heavy decreases.

If shareholders will only enter this contest determinedly they must succeed in bringing about a change and improving the value of their property. It has been acknowledged over and over again on both sides that competition of some sort exists between the two companies (indeed, one of the Great Western directors characterised it as a "wicked" competition), and the experience of more than 20 years proves that Canada even now is not sufficiently developed to justify two English companies contending to their own detriment for such traffic as exists. It now rests with the proprietors to decide as to the necessity of a change being made.

Messrs. C. de Murrieta and Co. notify that the payment of the dividend due April 1 on the Buenos Ayres 6 per cent. State Loan, 1870, will commence on that date.

Messrs. J. S. Morgan and Co. notify the holders of the certificates of the First Preferred Capital Stock of the St. Louis Bridge Company that the lease of its property, &c., to the Wabash St. Louis and Pacific Railway Company, and the Missouri Pacific Railway Company, having been formally ratified, it is desirable that the certificates should have the new agreement endorsed upon them, which can be done on application at their offices.

The letters of allotment and regret of the Cattle Ranche and Land Company were posted on Thursday evening.

Mr. J. A. Hankey, of Messrs. Gellatly, Hankey, Sewell, and Co., of Leadenhall-street, has joined the board of the Direct American Fresh Meat Company.

The Ontario Silver Mining Company's regular (77) monthly dividend of 50 c. (2s.) per share has been declared for February, and is now payable in London on all stock registered in England.

The incorporated mining companies of the United States during the past year are reported to have yielded $16,626,683, that is to say:—Gold mines, $3,901,563; silver, $7,111,125; gold and silver, $2,634,000; copper mines, $2,905,000; quicksilver and lead, $75,000.

The Madras Gold Mining Company captain's report (Jan. 29) says that after the arrival of the manager, Mr. Robert Hoggan, and after a close inspection of the various outcrops of quartz on the property, both Mr. Hoggan and himself came to the conclusion that it would be advisable to get as much prospecting done as possible during the cool weather, but as the number of European miners is quite inadeqeate to carry out any extensive works, he has had to suspend operations in two or three shafts hitherto working. Of course the suspension will be only temporary, as on the arrival of the mining captain and staff work in these shafts can be resumed at any time. There is a considerable amount of costeaning being proceeded with, and where favourable indications are met with. Other prospecting shafts will be started to thoroughly prove the property. The different works enumerated above should, he thinks, go a very long way towards testing the value of the different reefs, and the mode of prospecting initiated will, he trusts, commend itself to their judgment as being the most efficient that can be pursued.

Notice is given that the list of applications for the debentures in the Ottoman railway from Smyrna to Aïden of his Imperial Majesty the Sultan, extension to Serakeny, issue of 5 per cent. debentures, will close on Saturday, for London, and Monday morning for country applications.

GAS SHARES.—The principal business in these shares, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, has been—Bombay (Limited), 5¾; Buenos Ayres, New (Limited), 8 5/16 to 8⅜; Commercial, 190 to 187; Continental Union (Limited), 24½ to 24¾; European (Limited), 19½; Gas Light and Coke, A (ordinary), 163½ to 167½; ditto, B, 4 per cent. max., 80 to 80½; ditto, D, 10 per cent. pref., 215¼ to 215½; ditto, E, 10 per cent. pref., 212; ditto, F, 5 per cent. pref., 105; ditto, G, 7½ per cent. pref., 127½; ditto, H. 7 per cent. max., 128 to 128½; ditto 4½ per cent, debenture stock, 102½; Imperial Continental, 186½ to 187½; London, 191 to 192; Oriental, new (1879), 1¼; Rio de Janeiro, 24½ to 24¾; South Metropolitan, B, 168 to 169¼. Gas stocks firm, especially Imperial Continental Gas. For closing prices see list on the last page of Journal.

INSURANCE SHARES have, according to this evening's report of Messrs. W. L. WEBB and Co., of the Stock Exchange and Finch-lane, been dealt in as follows:—City of London Fire (Limited), 17/16 to 1 5/16; Commercial Union, 24¼ to 24 13/16; Employers' Liability Association Corporation (Limited) 2 to 2 1/16; Fire Insurance Association (Limited), 3 3/16 to 3 5/16; Home and Colonial Marine (Limited), 3; Indemnity Marine, 18½ to 19; Imperial Fire, 145; London and Provincial Fire (Limited), 1 3/16; London, 62; Merchants' Marine, 1¼; Marine (Limited), 27 to 27½; North British and Mercantile, 66 to 66½; Ocean Marine, 3; Phœnix, 300 to 301; Universal Marine (Limited), 7½ to 8. Insurances flat, and rather sellers. For closing prices see list on the at page of Journal.

TRAMWAYS.—The closing prices of this evening, as quoted by Mr. W. ABBOTT, of Tokenhouse-yard, are given in tabular form in the last page of the Journal.

RAILWAY AND GENERAL MARKETS.—Referring to the course of business done to-day during official hours (11 to 3) Mr. Ferdinand R. Kirk, 5, Birchin-lane, writes:—*Opening:* Sellers of Unified may still obtain 66¾. Buyers are giving 28 for Spanish. Erie are something weaker, being only $33. Operators are rather distrustful of the New York market, which has now been firm three days in succession. Dover, A, 127¼ to 127½. Brighton, A. 143½ to 143¾. Wheal Crebor, 2¾ to 2 7/16; Ruby, 3 3/16 to 3½; new shares (issued at 1*l*.), 2 to 2¼; Potosi, 1 5/16 to 1 3/16; Hoover Hill, 5/16 to 7/16; Don Pedro, 5/16 to 5/16; Nouveau Monde, 1/8 to ¼; Richmond, 11 to 11½; Panulcillo, 5¾ to 6; Hudson Bay shares are 32½ to 33.—*Closing:* Prices have rather given way, from holders being disposed to secure their profits. Dover, A, has receded 5/8, and Sheffield, A, ½. Eries are now $37¼; Reading shares being $29½ to 29¾; Devon Consols, 7 to 7½; Eberhardt, ¾ to 5/8; Emma, 2¼ to 2½; Prince of Wales, 9s. to 11s.

The Rio Tinto Company announce payment of the drawn bonds and coupons due 1st prox. on their 5 per cent. issue of 1880. They invite holders to present coupons or drawn bonds as once.

CHONTALES COMPANY.—The directors are in receipt of advices from their manager dated Feb. 5 last, who reports that during the previous month the ground in Consuelo had been hard and unproductive. No ore had been crushed during the month. The cost at the mines was 295*l*. The manager had resolved to push on the deep level at Consuelo with all dispatch, and he hoped soon to report better progress.

DARLINGTON IRON COMPANY.—The required capital to free this company from liquidation, 50,000*l*., has been subscribed, and that the liquidators will, as a consequence, shortly make an application to the Court to stay proceedings in liquidation. Following that, a meeting of shareholders will be held to formally appoint the direct tors and take other measures for the reconstruction of the company.

EUREKA (NEVADA) SILVER.—This week's report shows that fair progress has been made in the Bald Eagle workings, and the indications for ore are more favourable. A considerable improvement is also to be noted in the Williamsburg.

BRATSBERG.—A further report from the managers, dated 8th inst., has been received. The aggregate value of the different ends and stopes is nearly 350*l*. per fathom. At several points additional ground has become available for stopes, and considerable quantities of rich ore are being opened throughout the mine. They have about 3000*l*. worth of ore on the dressing-floors, and soon after Easter, when the steamers will resume running on the lake, the first shipment, probably about 200 tons, and worth above 13*l*. per ton, will be made. By another winter it is hoped that the company may have its own steamer, which will be available when required.

OLATHE SILVER MINING COMPANY.—The careful and exhaustive manner in which Mr. Kendrick, the secretary, has on behalf of the directors set forth the refutation of the adverse statements made by certain Leadville newspapers with regard to the property of the company cannot but be regarded as gratifying to the shareholders. It is unquestionably shown that other and very different opinions are both entertained and published in the district, and there can be no doubt that there is full justification for Mr. Kendrick's observation that it is difficult to understand on what theory a flat lode found on three sides of the Olathe claim should not extend under and through it. The sketch plan and evidence in another column should be carefully perused.

DEVON FRIENDSHIP.—The 30 west continues to improve; worth full 5 tons of arsenical mundic per fathom, and good stones of copper ore. Other parts of the mine remain the same, and the operations generally are progressing satisfactorily.

TIN HILL MINES.—These mines were visited by the directors and shareholders last week, when a general inspection of the works above and underground was instituted with the result that general satisfaction was shown at the thorough manner with which the whole of the operations have been conducted. Underground the prospects were pronounced decidedly good; fine specimens of ore being broken from different parts of the workings, while the whole of the run of ore ground averaged good paying work, taking poor and rich stuff together. Rich samples of ore taken from a cross level at its intersection were much admired by the visitors, the quality being so nearly pure as to require no preparation for the smelting house.

EAST ROMAN GRAVELS.—They have sold 40 tons of lead ore for the month, at 9*l*. 14s. 6d. per ton (389*l*.) The mine looks well.

NORTHERN LEAD.—The lode in the 37 at Brandon Walls has improved to 25 cwts. of lead ore per fathom, and the mine generally is very promising.

PEDN-AN-DREA.—This old mine is gradually increasing its returns, and is already meeting the cost of working. As the 68 fm. level and the deeper ones are cleared of water larger quantities of mineral will be sold. The shares are almost entirely locally held, thus showing their confidence in the future of the mine.

WHEAL HONY AND TRELAWNY UNITED SILVER-LEAD MINING COMPANY.—The choke in the engine-shaft is entirely removed and a standing drawing lift in course of fixing 70 fms. from surface. The 78 fm. level was driven by the late Trelawny Company quite up to the Hony boundary where it was very productive when suspended, and it is expected this level will be drained in a fortnight from the present time. A very rich course of ore is proved to exist from this point down to the 108, where the late Trelawny Company made their encroachment, and there is not any reason to doubt that it extends downwards to the greatest depth yet attained in that district. The lode in the adit level in the centre of the Hony estate is producing rich ore, though only 10 fms. from surface, a rather remarkable circumstance in this locality, which rarely yields ore so shallow.

EAST HONY MINING COMPANY.—The engineers are rapidly erecting the engine, which will be completed next month. In the adit level, driving southward on its course, the lode is of a splendid character, now producing silver-lead. It is confidently believed that this will prove equally as rich as the Old Wheal Mary Ann and Trelawny lode now worked by the Hony and Trelawny Company.

GREAT WHEAL VOR AND WEST VOR.—Truth is by no means a plausible or all convincing quality. Like a rough diamond, it does not possess any self-evident beauty. The celebrated Great Wheal Vor, which has been called the Queen of mines, at one time produced from 200 to 300 tons of tin monthly; it had been worked for a period of about 50 years with varying success when operations came to a standstill in the year 1877, owing to the great fall in the price of tin, and the great depth of the mine, which had reached about 525 fms. The following is an extract taken from the *Mining Journal* of Dec. 13, 1873, referring to a meeting of the shareholders in this property: "The meeting very properly decided on prosecuting the western ground. It is, however, the opinion of all the mining authorities who have inspected the ground that going further west the lodes are likely to become more productive. This opinion is now endorsed by Captain Thomas, of Dolcoath Mine. Great Vor has held its way for 14 years without a call, and in that period has given 88,324*l*. in dividends. It is stated on good authority that if this mine now resumed work it would again be yielding large dividends at the present price of tin. The extensive mining sett immediately to the west of Great Vor, containing as it does the same lodes in all their richness, is now the property of the West Vor and Leeds United Company, which is to be congratulated on having acquired what may justly be described as the richest piece of mineral ground in the whole of Cornwall, the truth of which assertion has already been proved by practical results, which no man can gainsay. The geological features of the two mines are identical, and it is only natural to infer that somewhat similar results will follow upon further development.

LEAD ORES.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
March 10	Central Foxdale	80	£15 1 0	Panther Lead Co.
14	Lisburne	65	11 6 9	Weston, Son, and Co.
	Cwmystwith	30	9 1 0	ditto
16	Assheton United	30	9 10 0	Nevill, Druce, and Co
	Tankerville Great Consols:—			
	Tankerville	13	9 0 0	Adam Eyton.
	ditto	13	9 0 0	Panther Lead Co.
	ditto	14	9 0 0	Nevill, Druce, and Co.
	Bog	10	9 0 0	Walker, Parker, & Co.
	East Roman Gravels	40	9 14 6	Walker, Parker, & Co.

Frongoch has sampled 100 tons, and Grogwinion 50 tons, for sale next week.

BLENDE.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
March 14	Bryn-yr-Afr	20	£3 7 6	Swansea Vale Co.
16	Tankerville Great Consols:—			
	Bog	35	3 16 0	Dillwyn and Co.
	ditto	15	3 2 6	Villiers Spelter Co.

COPPER ORES.

Sampled Feb. 22, and sold at Tabb's Hotel, Redruth, March 9.

Mines.	Tons.	Price.	Mines.	Tons.	Price.
Mellanear	85	£3 11 0	Mellanear	48	£2 11 6
ditto	82	3 11 0	Wheal Jewell	53	1 10 6
ditto	80	3 6 6	ditto	41	3 10 0
ditto	77	3 0 6	ditto	33	3 11 6
ditto	68	2 5 0	New Cook's Kitchen	55	4 6 0
ditto	65	2 14 6	ditto	20	2 4 6
ditto	54	1 14 6	Carn Brea	48	2 14 6
ditto	51	1 16 6			

TOTAL PRODUCE.

Mellanear	610	£1731 14 6	New Cook's Kit	75	£ 281 0 0
Wheal Jewell	127	342 6 0	Carn Brea	48	130 16 0

Average standard ..... £99 18 0 | Average produce 5⅛
Average price per ton £2 18 0
Quantity of ore ..... 860 | Quantity of fine copper, 43 tons 11 cwts.
Amount of money £2485 16 6

LAST SALE.—Average standard, £101 12 0 | Average produce 5½
Standard of corresponding sale last month, £ 95 19 0 | Produce, 7

COMPANIES BY WHOM THE ORES WERE PURCHASED.

Name.	Tons.	Amount.
Vivian and Sons	213½	£ 593 19 3
Grenfell and Sons	185½	592 1 9
Nevill, Druce, and Co.	175½	433 13 3
Williams, Foster, and Co.	214½	651 1 9
Mason and Elkington	71	205 0 6
Total	860	£2485 16 6

Copper ores for sale on Thursday next, at the Royal Hotel, Truro—Mines and parcels.—Devon Great Consols 1028—South Caradon 470—Gunnislake (Clitters) 387—Marke Valley 165—Prince of Wales 112—Holmbush 88—East Caradon 65—New West Caradon 35—Mid-Devon 16—Calstock and Danescombe 6=2372 tons.

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References: MINING JOURNAL, England; MINING PRESS, California, United States of America.
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Returns for English Assays, &c., in 20 days.

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Transact business in every description of Stocks and Shares.
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77, BLOOMSBURY, OXFORD STREET; AND 2, UPPER BROOK STREET, MANCHESTER.
Bankers: Manchester and Oldham Bank (Limited), Pall Mall, Manchester.

JOSEPH TOMS, STOCK AND SHARE DEALER,
No. 88, BISHOPSGATE STREET WITHIN, E.C., has FOR SALE—

25 Goodevere.	100 New Trumpet.	110 Devon Great United
100 East Blue Hills.	20 Mostyn Consols, offer wanted.	50 Prince of Wales.
50 United Van and Glyn.		200 N. Zealand Kapanga, offer wanted.
100 Bratsberg.	80 Devon Friendship.	

Special business can be transacted in the shares against which prices are not affixed.
For a great rise—New Trumpet Consols, Sinclair Lead, and Great Holway shares should be bought.

TO INVESTORS AND SPECULATORS.
NEW TERRAS TIN MINE (LIMITED).—An unusual opportunity for large profits on small outlay under mutual terms, management and respectability being of the first order. Prospectus and plan on application.
H. B. RYE, 74, Cornhill, E.C. Established 1845.

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(MR. HOSKING has been 12 years under Messrs. John Taylor and Sons.)
Special Business in Spanish, French, and Cornish Mines:—

	Buyers.	Sellers.		Buyers.	Sellers.
Fortuna	£3 10 0	£4 0 0	Sentein	£0 8 6	£0 9 0
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WEST VOR AND LEEDS UNITED strongly recommended for a great rise. Early application is necessary to secure these shares at par.
Cheques to be crossed.

MESSRS THOMPSON AND SON, OLD TOWN STREET, PLYMOUTH (Established 27 years), have FOR SALE the undermentioned SHARES, for which offers are requested, viz.:—100 Mounts Bay Consols, 250 Standard Bank of London, 50 East Wheal Rose, 25 West Wye Valley, 20 Penyr-Orsedd, 75 Royalton, 50 Pelyn Wood, 50 Lady Bertha, 70 Sortridge Consols, 150 Tresavean, 100 Bodidris, 20 Kopf's Extract of Meat, and numerous other shares, a list of which will be sent on application.

ESTABLISHED 1863.
MR. THORMAN WOODWARD,
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T. W. can supply a few shares in a Tin Mine just about the point of a good discovery, which is nearly certain to cause a great rise in value of shares. Good for any amount. Immediate application necessary.

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26, LONDON WALL, LONDON, E.C.,
Have Agents in the various Mining Districts of Great Britain, the Continent, Australia, and the United States of America.
Inspections undertaken, either personally or by our Agents, and Reports of Advice as to Working given.

JOHN THOMAS, STOCK AND SHARE BROKER.
(On commission only.)
Mines inspected and faithfully reported on. Mining Machinery valued.
Estimates given for the erection of Mining Plant.
Twenty Years' Experience.
Advice given as to Buying or Selling Mine Shares.
ADDRESS—REDRUTH, CORNWALL.

TO INVESTORS.

THE

RICO SILVER MINING COMPANY OF COLORADO

Has made substantial progress during the past year. It is engaged in a plain, carefully-managed, business-like Mining Enterprise, affording the opportunity for really immense dividends.

The shares already issued are held principally in London, Manchester, and Chicago.

I shall be very pleased to send this year's prospectus of the company, upon receipt of request therefore.

J. J. WEST, President.

245, Wabash Avenue, Chicago, U.S.

Notices to Correspondents

*** Much inconvenience having arisen in consequence of several of the Numbers during the past year being out of print, we recommend that the Journal should be *filed* on receipt; it then forms an accumulating useful work of reference.

THE GOLD AND DIAMOND FIELDS OF SOUTH AFRICA.—The letter from "Correspondent," dated Kimberley, Feb. 16, shall appear in next week's Journal.

Received,—"T. A. R."—"W. M."—"R. B." (Dalston): This matter has already been settled—"D. S. G." (Edinburgh)—"J. C." (Akankoo)—"D. F."—"R. G. S."—"T. E. H." (Glasgow)—"Shareholder" (North Busy)—"T. W."—"E. R. M."—"Oculus"—"A. J." (Philadelphia)—"W. F. C." (Glenholdt) should have appended his name to the letter on Leadhills; it would then have appeared in the Journal—"T. C. K."—"An Outsider" (New Callao)—"Pro Bono Publico" (Ooregum Gold Company).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, MARCH 18, 1882.

CHAIN HAULAGE IN MINES, &c.

The question as to the best system of haulage in mines and at the surface has long been debatable matter, but it would appear as if we are rather behind some of our continental brethren on this important subject, being content with things as they are, without desiring to work in new grooves. In Belgium considerable advances have been made, and systems lately adopted which we are almost unacquainted with. This is more particularly the case as to both underground and surface haulage. At Mariemont the underground haulage is now effected by means of endless chains, the entire system being self-acting, so that the tubs find their way from the farthest workings to the shaft bottom without the expenditure of a single foot-pound. The beds having a very considerable pitch, by husbanding the power gained by the branches which work from the rise a sufficient surplus is obtained to drive the chains, which proceed along the level course or strike. At the place named, Mariemont, it is said that the application of the endless chain has been carried to an extent and with a degree of perfection never attempted anywhere else. The chains vary from $\frac{3}{4}$ to $1\frac{1}{4}$ in. in thickness, according to the amount of strain they are likely to be subjected to, and rest in forks rivetted to the front of the tubs or tram, the tracks, about 2-ft. guage, running up and down hill, the maximum grade being about 20 ft. in 100. The driving wheel for the chains consist of a disc rather more than 2 ft. in diameter, carrying forks that catch the chain, these being made of iron or steel, and form the heads of long heavy screws lying radially in the disc. As the length of the chain increases, owing to the ordinary wear and tear, the forks are screwed out as many half turns as are necessary to give the wheel the proper pitch. Whenever the chain becomes so long as to drag on the ground it can be shortened. At Mariemont there are six shafts connected by tramways with the stopping place, which is near to one of them, the total length of the tramways on the surface being 17,200 ft., and underground 13,500 ft. The longest tramway on the surface is 3900 ft. in length, and carries the output of the shaft it is directly connected with as well as two others. At the point of transfer the trams are guided by hand from one chain to the other. The adjoining mine of Bascoup, along with that of Mariemont, are looked upon as the head-quarters in Belgium of mechanical inventions, and are well known in the mining world. The chains on the surface of roads of both are driven by stationary engines, with transmission of power by wire-ropes, and by the surplus power of inclined planes underground, the power of the descending loaded tubs being more than sufficient to hoist the empty ones. At each of the points where the change of inclination takes place a weighted roller prevents the chain leaving the fork, and is raised an inch as the tub passes under it. In addition to the endless chains already described, some of which branch out from the central screen sheds to the several pits, there are other branches extending from the central screens to the timber-yard, store-house, shops, and other buildings, so that any one point can communicate with another by chain, and thus timber fittings and stone being placed in a tram have only to be labelled with the name of the pit for which they are intended, and passing through the central station they are sent out from there to their proper destination, whilst similarly coal, wood, or other material coming from the pits are directed to any point, and delivered accordingly or on to the screens.

The latter are very flat, by which the breakage of the coal to a large extent is avoided, and these are the invention of Mr. BRIANT, the engineer-in-chief of Mariemont and Bascoup. The coal travels along the screens, by making every alternate screen-bar moveable and giving them a reciprocating motion by means of eccentrics. In the first screen over which the coal passes the bars are 3 or 4 in. apart, so that only fine large lumps are separated. The coal is then further classified into two or three other sorts by falling in similar but closer sets of bars underneath; and finally, after having travelled round upon revolving tables or grills and been picked free from stones by hand it empties itself into the wagons. There are two great central screening depots—one for the pits of Mariemont and one for those of Bascoup. The tubs are conveyed from the four or five pits belonging to each colliery along the surface by means of the endless chains. Arriving all together at the screens they are branched off in various directions by several short chains leading to the tumblers, where they are received by girls and discharged. The empties are successively attached to the returning chains, by which they find their way back to the different pits, whilst the discharged loads of coal gently travelling along the screen bars become separated into classes, and are borne to the different wagons quite automatically. Thus, under one roof the screening of 1600 tons a day is carried on with the regularity of clockwork, and that by young girls, whose labours are seconded by a couple of steam-engines. The joint output of the collieries of Mariemont and Bascoup is upwards of 3000 tons per day, the largest daily output from one shaft being 700 tons. In connection with the two collieries named, in addition to the fine system of haulage by means of chains, there is a novel system of lowering and raising the men. M. WAROCQUE, one of the late owners, appears to have been a mechanical genius of no ordinary type, for he made great improvements in what is known as the *fahrkunst*, or man-engine, producing an apparatus for the raising and lowering of the miners, known as the "warocque," in honour of the inventor, and which is now exclusively used at the shafts of the two collieries. The apparatus, a modification of the *fahrkunst*, consists of two vertical reciprocating rods or spears near together, and each bearing a series of platforms. The rods or spears move alternately upwards and downwards, bringing the sets of platforms upon each road exactly opposite those on the other rod at every stroke.

The ascending or descending miners stop at the proper instant from platform to platform, and thus wend their way upwards or downwards 10 ft. at each stroke, and at the rate of seven or eight strokes per minute. The platforms are railed round, and are amply large enough to allow two men to pass each other, and thus a great portion of an entire pits crew may be upon the "Warocquere" at the same instant, some ascending and some descending. The system, one would think, should commend itself to those having the control of metalliferous mines in this country, instead of the present old-fashioned, dangerous, and exhausting mode by ladders, &c. The general director of the company—M. GUINOTTE—has also introduced a valuable system of automatic variable expansion for winding-engines, by the combination of the motions of several eccentrics; and the ingenuity with which the system has been devised, we are told, is only equalled by the skill and mathematical precision with which it has been carried into effect. An application of the system has been applied to a large pumping-engine at Bascoup. The engine is rotative, fitted with an overhead beam, and is controlled by a pair of heavy fly-wheels. The degree of expansion employed is that of 10 to 1, and the actual useful effect is no less than 81 per cent. The pump rods are of round iron, the pumps being of novel construction, nearly every detail of the engine showing some novelty of a practical character. The interesting novelties which we have brought under notice cannot fail to interest those engaged in mining pursuits, and show them that there is something to be learnt from an acquaintance with foreign mines.

OUR RAIL EXPORTS.

Our exports of steel rails appear to have acquired a great further development this year. Notwithstanding all the talk about the increase in the reproductive capacity of American rolling mills, it is certainly not a little remarkable to find that 17,774 tons of steel rails were forwarded to the United States last month, as compared with 4380 tons in February, 1881, and 6162 tons in February, 1880. To British India we also sent 4762 tons of steel rails last month, as compared with 566 tons in February, 1881, and 4840 tons in February, 1880. Australia and New Zealand took 8994 tons of steel rails from the Mother Country in February this year, while their corresponding consumption in February, 1881, was 5946 tons, and in February, 1880, 3030 tons. Altogether the exports of steel rails in all directions last month attained the considerable aggregate of 56,354 tons, as compared with 20,672 tons in February, 1881, and 20,486 tons in February, 1880. The exports of iron rails in February presented some decline, but they still attained a total of 7068 tons, as compared with 10,945 tons in February, 1881, and 8841 tons in February, 1880. The shipments of iron rails to the United States last month comprised 5404 tons, as compared with 10,419 tons in February, 1881, and 6608 tons in February, 1880. It will be seen that it is the American demand which mainly sustains the exports of steel rails at the present time. Altogether the combined exports of iron and steel rails in February, 1882, amounted to 63,422 tons, as compared with 31,617 tons in February, 1881, and 30,327 tons in February, 1880.

When we come to deal with the exports for the first two months of this year the results disclosed are still more encouraging. Thus, iron rails were exported to February 28 to the extent of 18,173 tons, as compared with 18,029 tons in the corresponding period of 1881, and 19,984 tons in the corresponding period of 1880. Similarly, steel rails were exported to February 28 to the extent of 113,150 tons, as compared with 43,912 tons in the corresponding period of 1881, and 50,452 tons in the corresponding period of 1880. The combined exports of iron and steel rails in the first two months of this year were thus 131,323 tons, as compared with 61,941 tons in the first two months of 1881, and 70,386 tons in the corresponding period of 1880. In the iron rail exports for the first two months of this year the shipments to the United States figured for 14,167 tons, the corresponding movement in the corresponding periods of 1881 and 1880 being 16,082 tons and 14,549 tons respectively. Steel rails were shipped to the United States in the first two months of this year to the extent of 36,278 tons, while the corresponding movement in the corresponding period of 1881 did not exceed 6085 tons, and in the corresponding period of 1880, 13,512 tons. The movement of steel rails to British India to February 28 this year was 15,562 tons, as compared with 3267 tons and 17,854 tons in the corresponding periods of 1881 and 1880 respectively. Australia and New Zealand took 18,143 tons of steel rails to February 28 this year, while the corresponding shipments in the corresponding periods of 1881 and 1880 did not exceed 11,278 tons and 4789 tons respectively. The large increase in the American demand for steel rails this year can only be explained on the hypothesis that, notwithstanding the increase in the productive powers of American rolling mills English steel rails can still be delivered upon cheaper terms than American at certain ports of the United States, such as San Francisco, New Orleans, or Galveston. To reach such ports as these American steel rails would have to be carried very long distances by railway, and the cost of transport would accordingly enable English rails to be delivered upon lower terms. Whatever may be the course which our export rail trade may take during the remainder of 1882, it certainly must be admitted that it has commenced the year in a very encouraging and satisfactory fashion.

RAILWAY RATES AND THE GROUPING OF MINES.

The decision come to by the Railway Commissioners a short time since that the grouping of mines in a certain district, and charging a uniform rate for the conveyance of minerals from them, was unfair to one at least, has been the means of disturbing a system which has worked satisfactorily for a quarter of a century. The Manchester and Sheffield Railway Company grouped a certain number of mines together in South Yorkshire, giving the same rate from each to different places. By this means some of the mines were nearer to a certain town than others, and *vice versa*, so that an advantage gained in one direction by a mine was counterbalanced when the material had to be sent in an opposite one. The Denaby Main Company, sending a large quantity of coal to Hull, to which the mine was the nearest, complained that, from their geographical position as regarded that town, they ought to be charged a less rate than mines that were three or four miles further off from Hull. This was demurred to on the ground that the system had worked well, and that the advantages and disadvantages as to distance counterbalanced each other. The Railway Commissioners, however, thought that position and distance should be considered, and gave a decision in favour of the owners of the mine, that they should be charged less to Hull than those that were two or three miles further off. This, in fact, was a decision in favour of a mileage rate, which, if carried out, would be most injurious to the mineowners in all parts of the kingdom. The Commissioners stated—"We come to the conclusion that the grouping system, as it affects the applicant, does subject him to undue and reasonable prejudice." But the fact is that the party alleged to be aggrieved was working a seam of coal in common with others, sending to the same place, and, by the decision of the Commissioners, he was placed in a position to make a larger profit than those owners who chanced to be two or three miles further away from the place where the coal was being sent to. Had the owners of Denaby Main been sending in the opposite direction to Manchester they would have only had to pay the same rate as those mines who were much nearer that city. But the grouping of mines having worked most satisfactorily it was proposed to enact in a Bill before Parliament that such should be legal, and this met with the approbation of the mineowners who would be affected, perhaps with one exception. The Bill alluded to was one connected with the Manchester, Sheffield, and Lincolnshire Railway and Cheshire lines, and for conferring powers upon the two companies. Clause 15 allowed companies to group certain mines on the lines, and to charge exactly the same amount from each to certain places. On the second reading of the Bill, a few days ago, the opposition was such that the clause had to be withdrawn. Some mineowners, however, are said to have given notice that before the third reading of the Bill they would move the re-insertion of the clause in committee. The grouping system, whether as regards mineral or metalliferous mines, within a moderate radius, has certain advantages over a mere mileage rate, for it gives no advantage to one owner over another. Were a mileage rate adopted in the conveyance of coal, for instance, to the London market some of the finest districts would be left out in the cold altogether, and the trade would he carried on in those where the material was inferior, and, with a low rate, could be sold at a considerably less price.

By the grouping system, too, a certain number of mines pay the same rate, so that there was fair competition, by which the public was benefited, and this would not be the case were an advantage given to one over all the others. Indeed, were there to be a mileage rate charged for coal the Denaby Company would be one of the first to protest against it. As an illustration of this we may take the position of South Yorkshire and Derbyshire, in which the same seams of coal are worked, both districts doing a large trade with London. The lowest rate from Derbyshire to London, a distance of 130 miles, is 7s. 1d. per ton, whilst the average distance from the mines in South Yorkshire is 172 miles, and the railway rate to London 8s. 3d. per ton. Now, were there a mileage rate it is evident that the charge from South Yorkshire, as compared with that from Derbyshire, should be 9s. 4d. per ton at least. Now, were the latter rate in force, as it should be according to the advocates of a mileage rate, we need scarcely say that very little coal would be sent to London from the South Yorkshire district. Again, coal is sent from South Wales, an average distance of 204 miles from London, at 8s. 5d. per ton, or only 2d. per ton more than from South Yorkshire, although the distance is 32 miles further, So that it may be said the Great Western Railway, for instance, carries some of its coal 32 miles for 2d. a ton—that is the difference between the two districts. But it is this closeness of the rate, irrespective of distance, that conduces to the healthy competition which exists, to the benefit of the consumer. The nearest coal mines to the Metropolis are those in Warwickshire Leicestershire, and South Staffordshire, but not much coal is sent from those counties, as it is not suitable for the market, being far inferior to any of the seaborne, as well to the Nottinghamshire, Derbyshire, and West Riding. Notts and Derbyshire supply about one-half of all the coal that is sent to London by railway, and if there were to be a mileage rate these two counties, so much nearer than Yorkshire, Lancashire, and North and South Wales, would have an actual monopoly of the London market so far as inland coal is concerned, and we need scarcely say that would not be conducive to the interests of the metropolitan consumers. These facts should be known to the members who may take part in the discussion of the Railway Bill when the third reading comes on, as Mr. MONCK, the member for Gloucester, has signified his intention of opposing any addition having for its object the grouping of a number of mines in any one district. We believe that Mr. BARNES, the member for East Derbyshire, and one of the owners of the Grassmoor Colliery, near Chesterfield, will take the initiative in moving the clause that was omitted owing to the threatened opposition to the second reading, and it is to be hoped, in the interest of mineowners and the public, to whom monopolies are always injurious, that he will be successful.

SUCCESSFUL MINING MACHINERY.—Messrs. Hathorn and Co. were on Friday honoured by a visit from the Duke and Duchess of Manchester, who having heard of the extraordinary work done by the Eclipse rock-drill and Reliance air-compressor, were desirous of seeing these machines in action. The view took place at the depôt of the firm in Lambeth. The stone selected was a piece of tough granite 10 in. thick, which was pierced in 1 min. 30 sec. The drill used had a cylinder of $2\frac{1}{2}$ in. diameter and a drill bit of $1\frac{1}{4}$ in. diameter. The compressor maintained a steady pressure of 70 lbs. of air to the square inch. The duke and duchess also saw a direct-acting pump in motion, and closely examined Messrs. Hathorn and Co.'s patent hydraulic tunnel column with drill mounted thereon. It need scarcely be added that the whole of the machinery worked exceedingly well. The noble visitors expressed their utmost satisfaction at all they saw, and also were much interested with the account of the admirable working of the Eclipse drill 36 ft. under water in the works now in progress in Plymouth Harbour for removing a reef of rocks now there, as well as the efficient work now done by the same drill in preparing the foundations for the new Eddystone Lighthouse.

A NEW RAILWAY ENGINE.—Considerable interest was created in Manchester, on Wednesday, by the trial of a new American railway engine, which started from the Victoria railway station with a Lancashire and Yorkshire train to Leeds. The engine was made at Philadelphia for the Eames Vacuum Brake Company. Mr. Eames has secured a concession from several English railways to run one of his engines on their lines; and this one has been made especially and brought over to this country. It was put together at the works of the Lancashire and Yorkshire Railway at Newton Heath, and on Wednesday made its first trip on an English railway. It is much larger than any English locomotive. The engine and tender are nearly as long again as an English locomotive and tender. The tender will carry 4000 gallons of water and 10 tons of coal. This would enable the train to make a journey from London to Edinburgh without stopping to take in water. The width also gives a greater surface to the fire-box, which is 7 ft. wide, and more than 8 ft. long. A greater heat is thus generated in the steel boiler, and the result is a greater sustained speed. It is not claimed that the engine will exceed in speed the English locomotives; but it will, it is said, keep up a high rate of speed for a much longer period.

THE MANUFACTURE OF DYNAMITE.—At the ninth annual re-union of the workpeople employed by Nobel's Explosives Company, held at Glasgow last week, the Chairman, Mr. George M'Roberts (manager of the works) gave some interesting details in regard to the manufacture of dynamite. In the year 1867 he said that throughout the world only 11 tons had been manufactured, and this production had risen gradually till in 1875 it reached 4000 tons. In their own factory at Ardeer the quantity produced had risen from 458 tons in 1876 to 973 tons in 1881, and was still increasing; while the demand for blasting glycerine was greater than they could supply.

INVESTMENT CIRCULAR.—It appears that it was by a series of typographical errors made in the correction of the March number of Mr. HORACE J. TAYLOR'S Investment Circular and Financial Record that the recommendations referred to in last week's *Mining Journal* as being made therein obtained currency. It is truly observed that the errors were so palpable that no one accustomed to deal in mining shares could possibly be deceived. This portion, moreover, of the Circular is acknowledged to be of secondary importance as compared with the elaborate tables showing the percentage of profit which an investor will realise upon purchasing at the price of the day into any of the various British, colonial, and foreign railways, tramways, or British or foreign dividend mines. These calculations must have involved an enormous amount of labour, and are well worthy of careful study.

NORTH PENSTRUTHAL.—The 108 is producing rich stones of copper. From the great change in the character of the granite, and the composition of the lode at this and the 120, a profitable mine may be near, seeing the cost of working is so little. The mine is fully equipped with machinery of every kind.

SOUTH PENSTRUTHAL.—The water is nearly out to the bottom of the mine. In a few days the large mundic lode, which is believed by all practical miners to be the forerunner of an exceedingly rich deposit of copper, may be seen. The mine bids fair to become an early prize.

BEDFORD UNITED.—There is little doubt but that the 30 east is coming into a good bunch of yellow ore; it is now valued at 4 tons, or 20*l.* per fathom, and being the same course of ore gone through in the level above it is fair to assume that some good paying ground is being laid open. In the 20 east the lode was productive for nearly 25 fms., and should the bottom level continue its present value for the same length it should turn out close upon 1000 tons of ore,

of a computed value of 4000*l*. For a shallow mine this is doing well, and is doubtless the pioneer of something much better, as we are led to believe by almost everyone who has seen the Bridge lode that great discoveries will be made as depth is attained. A call has been made this week, and this should improve the value of the property, as it enables the directors to clear off all liabilities.

THE LATE CHANNEL BALLOON TRIP.

Thanks to the inventions of a well-known mining engineer from Australia, Mr. Thomas Cornish, who has not only attained celebrity as a practical authority on gold mining and the resources of the Australian colonies, the dangers attendant on balloon voyages from dropping into the sea, or on inland waters, have been reduced to a minimum.

The aeronauts, Col. F. Brine and Mr. Simmons, having satisfied themselves of the value of Mr. Cornish's inventions of life saving appliances, had the balloon-car fitted with a set of his patent protectors on the outside, besides carrying a lifebelt each, in case of necessity for its use. In consequence of adverse winds the aeronauts determined to drop into the Channel, where they would get a chance of being picked up, in preference to being blown up over the North Sea. When the car struck the water it only sank to the cork protectors, when it could not sink deeper or be upset, supposing the balloon had been cut adrift, and by this simple and effective means the safety of the occupants of the ballon-car was ensured, and the safety of future aeronauts can also be similarly provided for.

Mr. Cornish's inventions relate to various articles of ship and cabin furniture, mattrasses, couches, seats, &c., which are made of floatable material. They answer for all ordinary purposes, and in time of danger can be all utilised as a means of saving life by forming them into rafts or lashing outside of boats. The boat-protectors are made similar to those fixed on the balloon-car, and are readily transferable from the inside to the outside of a boat, thereby preventing it from being stove in while lowering, upsetting, or sinking, and materially aiding its carrying capacity with safety.

In the early days of gold mining on Ballarat Mr. Cornish was an earnest advocate for a reform in the mining laws of Victoria, and for making provision for the safety of the miners by enforcing a better system of ventilation of mines, and the introduction of improved machinery and appliances for mining, and the introduction of the eight hour system of labour.

We can but hope the valuable inventions lately introduced into England by Mr. Cornish for the benefit of seamen and passengers will be the means of materially lessening the sacrifice of human life from shipwreck and other disasters at sea. We understand an influential company is being formed for the purchase of Mr. Cornish's patent rights and business, with the object of making it a "national" undertaking, and carrying on the works on an extensive scale, when it will no doubt command the support not only of the Government, but also most of the shipowners and shipping companies.

PROGRESS OF THE COAL AND IRON TRADES.

Two important documents in addition to that noticed in last week's *Mining Journal* have been issued by the British Iron Trade Association. It appears that the production of Bessemer steel ingots in the United Kingdom during 1881 was 1,441,719 tons, being an increase of 397,337 tons on the quantity produced in the preceding year. This increase is more than equal to the total make of Bessemer steel throughout the world in 1868, and exceeds also the total production of the United Kingdom in 1874. The production of Bessemer steel rails amounted during last year to 1,023,740 tons, being an increase of 283,830 tons, or 38 per cent., on the output of 1880. Seventy per cent. of the ingots made in 1881 were thus manufactured into rails. This is exactly the proportion which the one bore to the other in 1880.

The largest increase in both ingots and rails appears in the Cleveland district, where 264,986 tons of ingots were obtained with 14 converters, being an advance of 120,686 tons on the production of the preceding year. Of these 14 converters four were working for only a part of the year and two for only a few months. The Sheffield district shows an advance of 119,447 tons in the make of ingots, and of 94,285 tons in the production of rails, the total yield of 932,812 tons of ingots having been obtained with 26 converters, of which, however, six were inoperative for a part of the year. With the same number of converters working as in 1880 South Wales has obtained an increase of 76,423 tons on the production of that year, the aggregate make of ingots having been 384,656 tons, and of rails 305,043 tons. These three districts produced last year 1,042,254 tons of ingots, or 70 per cent. of the total make of the United Kingdom.

The quantities of Bessemer steel, ingots, and rails ascertained by the association to have been produced during each of the last five years have been—in 1877: ingots, 750,000 tons; rails, 508,400 tons; in 1878: ingots, 807,527 tons; rails, 633,733 tons; in 1879: ingots, 834,511 tons; rails, 519,718 tons; in 1880: ingots, 1,044,382 tons; rails, 739,910 tons; and in 1881: ingots, 1,441,719 tons; rails, 1,023,740 tons. There were 23 works and 82 converters in operation during 1881, while 27 converters were inoperative. A comparison of the figures for 1881 with the corresponding return for 1880 shows that there was an increase of four in the number of converters in operation, and a decrease of one in the number out of work on Dec. 31 last. The total number of converters erected in the country at the latter date was 109. A considerable number of these, however, are permanently unemployed, their location and their constructive arrangements rendering them unequal to compete with the newer plants. There were 14 converters being erected at the end of 1881, against 10 at the end of the preceding year, and seven at the end of 1879. Of the 14 converters being erected at the end of last year, 10 belong to entirely new plants. The average capacity over the whole is calculated at 60,000 tons annually per pair of converters, so that on the completion of the additions to the Bessemer steel-making resources of the country now actually in progress about 840,000 tons per annum will be added to the existing means of production. During the last three years there has been a considerable increase in the general productiveness of the Bessemer converters at work in the United Kingdom, the average annual yield having been 17,582 tons in 1881, against 13,125 tons in the preceding year, and 12,641 tons in 1879. Selecting from the aggregate the works that have been most productive during the year, we find that 21 converters produced 533,000 tons of ingots, being an average of 25,400 tons per converter. The results obtained at the different works during the year have been very unequal so far as quantities are concerned, some having been much higher and some much lower than the general average. Analyses of the returns show that five works with 21 converters in operation produced 533,000 tons, or an average of 25,400 tons per converter. Other five works, however, with 10 converters in operation during the year turned out only 48,015 tons, or an average of 4801 tons per converter. The best results obtained at any individual works was 64,861 tons with two converters, and 140,000 tons with a four-vessel plant.

The Board of Trade Returns show that 594,419 tons of the total steel rail production of last year were exported. The exports of steel rails in 1881 were thus 130,018 tons in excess of those of the preceding year, while the quantity left for home use was 153,812 tons more than in 1880. The total tonnage of Bessemer steel rails made in the United Kingdom last year was equal to the laying of about 9000 miles of railway. No real progress has been made during the past year in the direction of employing Bessemer steel for shipbuilding purposes. The total quantity of Bessemer plates made was 21,989 tons, being an increase of only 489 tons on the preceding year, and an advance of 12,838 tons on the production of 1879. Of the 400,000 tons of ingots which were used for other purposes than rails in 1881 a large part took the form of blooms for export to the United States. The production of blooms in 1881 was about 100,000 tons in excess of that of any former year. About 50,000 tons of ingots were manufactured into tyres, axles, and general forgings; and 15,000 tons were made into angles for shipbuilding purposes and so forth. The course of prices has been much more uniform in 1881 than it was during the preceding year. Statistics with which we have been furnished from some of the principal works show that in 1880 steel rails were sold as low as 5*l*. 7*s*. 6*d*., and as high as 9*l*. 15*s*. per ton. During last year, however, the minimum was 5*l*. 11*s*. 4*d*., and the maximum 6*l*. 10*s*. per ton, so that between the two limits there was a difference by increase of only 17 per cent. as contrasted with the difference of about 70 per cent. in the previous year. The statement of the prices of rails for the last 11 years at works in Wales show that the average of last year was the lowest of any year in the series except two, and that the average over the whole period was 9*l*. 12*s*. 11*d*., or 3*l*. 12*s*. 11*d*. more than that of 1881.

The statistics of the production of coal and ironstone (from the coal measures only) in 1881 shows that the total number of hands employed in and about the mines of the United Kingdom in 1881 was 495,477, as compared with 484,933 in 1880. The number of mines at work in 1881 was 3847, as compared with 3904 in 1880. The production of coal and ironstone from the coal measures in 1881 was—

Districts.	Coal. Tons.	Ironstone. Tons.
Northumberland, Cumberland, and North Durham	15,830,720	705
South Durham and Westmoreland	21,532,773	—
North Riding of Yorkshire and Cleveland	7,036	6,474,464
North and East Lancashire	9,326,722	—
Ireland	127,585	—
West Lancashire and North Wales	11,843,635	23,569
Yorkshire	18,237,141	171,146
Lincolnshire (ironstone)	—	90,539
Derbyshire, Leicestershire, Nottinghamshire, and Warwickshire	15,545,667	47,137
North Stafford, Chester, and Shropshire	6,473,900	2,113,600
South Staffordshire and Worcestershire	10,058,670	198,069
Monmouth, Somerset, and parts of Glamorgan and Breconshire	8,318,821	32,128
South Wales	16,008,525	111,934
Scotland, East	14,148,880	778,934
Scotland, West	6,674,175	1,816,381
Totals	154,184,300	11,853,766
Ditto in the preceding year	146,963,109	11,664,726

THE METEOROLOGICAL SOCIETY—ANEMOMETERS.

The usual monthly meeting of this society was held on Wednesday at the Institution of Civil Engineers, Great George-street, Mr. J. K. Laughton, F.R.A.S., president, in the chair. The following gentlemen were balloted for and duly elected fellows of the society:—T. H. Baker, J. T. Barber, W. H. Jackson, Captain J. Simpson, R. F. Sturge, and Sir B. J. Sulivan, K.C.B. The president (Mr. J. K. Laughton) gave a historical sketch of the different classes of anemometers. He remarked that anemometers are instruments for measuring the strength of the wind. They are of different classes, according as the strength is estimated by the pressure on a surface, or by the velocity, by its power of suction, or by its cooling effects. Those that measure pressure may do so either by causing the plate which receives the wind to swing backwards along a graduated quadrant, or by bridling—that is, restraining that motion—and observing the resistance called into play, or by receiving the wind on a plate which can only move backwards against either a spring, a lever attached to a weight, or a column of liquid; others, again, receive the wind on the surface of the liquid, and show the pressure by the disturbance of the equilibrium in a siphon tube. At the present time, and in this country, instruments that measure velocity are more generally preferred, the type now commonly adopted being that known as Robinson's cups, in which four hemispherical bowls placed at the arms of a horizontal cross cause it to rotate freely as the wind blows against them. But many very different instruments have been used for measuring velocity, the most primitive of which was a disc of cork fringed with light feathers—a species of shuttlecock—travelling freely along a considerable length of fine wire stretched in the direction of the wind. Rotation has, however, been the favourite way of bringing the motion of the wind within reach of the observer, and to get that rotation almost every conceivable form of wheel or fan would seem to have been tried. What are known as suction anemometers depend on the hydraulic principle of the lateral communication of motion by a stream. A current of air blowing across the open end of a pipe draws the air out of that pipe, causing within it a partial vacuum, which by various arrangements can be measured, the relative vacuum depending on the strength or velocity of the wind which gives rise to it. Several different methods have been adopted for measuring this vacuum. But though anemometers constructed on this principle take hold of the imagination by their neatness and simplicity the unknown amount of disturbance due to friction or (when long pipes are used) to vibration prevent their being received at present as satisfactory gauges of the wind's velocity.

Other anemometers have been made on the principle that the evaporation of water, or the cooling of a heated surface—other things being equal—goes on at a rate proportional to the velocity of the wind; but in practice it has been found difficult to insure the equality or uniformity of conditions, or to make correct allowance for their difference, and at least one very ingenious instrument by receiving the air into different pipes, opening different valves according to its varying strength, causes them to give out two simultaneous but distinct musical notes, the one of which answers to a definite direction, the other to a definite velocity. Such things can at present only be considered as pretty and ingenious toys. They can undoubtedly mark a difference between one wind and another, but are quite unequal to giving any exact measure of relative and still more absolute force. Even the more generally recognised types of anemometers, the very commonly used pressure plates of Mr. Osler, or the revolving cups of the late Dr. Robinson, are by no means entirely satisfactory. The action of stream lines in front or of the partial vacuum behind the exposed surface leads to curious vagaries difficult to understand, and as yet impossible to correct. But still they are understood and corrected. Anemometry, as a science stands on a very uncertain basis. The President, in conclusion, said that what we want is not so much new and improved apparatus for registering or recording; for though those we have are not perfect, they are far superior to the anemometers they are applied to. What we want is rather some radical improvement in the instrument itself, or in the theory which translates its action. It is to this that we would wish more especially to call the attention of all meteorologists.

In connection with this meeting there was an exhibition of instruments, consisting of anemometers and new meteorological apparatus, &c. The anemometers exhibited were 45 in number, and included among others those of Beckley, Biracator, Hagemann, Howlett, Lind, Lowne, Osler, Oxley, Robertson, Ronalds, Somerville, Whewell, and Wild. There were also photographs and drawings of old forms of anemometers, damage caused by whirlwinds, &c. The exhibition will remain open till Tuesday next.

THE AMERICAN TIN TRADE—STATISTICS OF TIN.

Feb. 1, 1882.—Stock in all hands, New York, Boston, and Philadelphia	Tons	1,420
Imported during Jan., Straits and Malacca, into Boston	*nil.*	
" " " into New York	125	
" " Australian, " "	50	
" " L. & F. "	25	
" " Banca	10=	210
		1,630
Consumption—During February	Tons	650
Total Spot Stock		980
Afloat to date, Straits and Malacca, Dec., Jan., and Feb. shipments, per steamers	Tons	1,695
Ditto ditto per sail	50=	1,745
Totals in all hands, spot and afloat	Tons	2,725

During the past month transactions in our metal market have been mainly confined to the strictest necessities of consumers, and with the exception of a reduction in the price of tin-plates values have been well maintained. Stocks of various descriptions have been further reduced, thus showing that there is so far no abatement in the increased consumption previously reported by us.

PIG TIN.—During the early part of the month our market improved under better advices from abroad, with a fair amount of business doing both in spot and to arrive at from 25 to 25¼, but the erratic fluctuations of the London market made our operators act with extreme caution, under the prevailing impression that increased quantities would be set forward from the Straits to the market. As soon, however, as cable advices arrived about the middle of the month, stating that the shipments to this side had then been only 275 tons, against 450 tons to Great Britain, a large line of floating tin, amounting to over 600 tons, was quickly secured at from 25¼ to 25½, and since then none from the first hand has been on the market below 25½. The total transactions for the month we estimate at about 1200 tons, which though considerably less than the average of the preceding three months, may be considered satisfactory looking at our reduced spot stock, which now hardly amounts to 1000 tons.

In connection with this we can state with the greatest confidence, that not only have our consumers and out of town dealers reduced their holdings to the smallest possible figure, but even some of our principal New York dealers find no small difficulty in keeping up an assortment of the various favourite brands, which have of late been selling at a premium owing to their scarcity. We cannot avoid repeating the opinion expressed in our last, that so long as our prices remain below the London quotations it will be impracticable to fully supply our wants in the East, and this we find confirmed by cable advices reporting the Straits shipments during February to London as 775 tons, as against only 420 tons to U.S.

The London market has been subject to many fluctuations in the course of the month. Opening at 109*l*. 15*s*. spot, and 112*l*. futures, prices rapidly advanced to 114*l*. spot, 116*l*. futures, to fall back by the middle of the month to 110*l*. 5*s*. spot and 112*l*. futures, and after advancing once more to 113*l*. 10*s*. spot, closed quiet at 111*l*. Heavy arrivals during the past month (nearly 2000 tons) may have caused this unsettled feeling, still it cannot be denied that, after all, prices have been well maintained.

At yesterday's Billiton sale at Batavia the usual quantity of about 13,000 piculs sold at an average price of $77·16 per picul—equal to fully 26 cents per lb. delivered here, all secured for European account.

Subjoined are the figures of importations and floating supplies during the first two months of the present year, as compared with the same period last year.

Arrivals in New York and Boston, Jan. 1 to Mar. 1:—	1882.	1881.
Straits and Malacca Tons	125	1765
Australian	100	82
L. and F. and refined	45	30
Banca and Billiton	10	3
Total Tons	280	1880
Afloat on March 1:—		
Straits and Malacca Tons	1745	650
Australian	unknown	—
Billiton	"	—
Total Tons	1745	650

Our closing prices to-day are buyers at 25 spot for Straits or Malacca; Singapore quoted 35; Penang, 34½; Exchange on London, 3s. 10d.—*New York, March* 1. EDWARD P. WHITE AND CO.

GOLD: ITS SOURCE AND GROWTH.

As great interest is at present felt with regard to every fact and opinion brought forward concerning the source of gold, and the obtaining of it as an industrial occupation, the views of Mr. V. Ball, the officiating deputy superintendent of the Geological Survey of India, whose volume on Indian Economic Geology is noticed in another column, will be generally acceptable. He says that in the washing carried on in an inclosed valley in the county of Wicklow the gold is probably not derived from a reef but from some schists and slates, in which it is probably very sparsely disseminated. The first washings made there in recent times proved the existence of a comparatively large amount of gold in the old alluvial deposits, but when it was exhausted no more gold was to be found in paying quantities, and no reef was ever discovered. An idea is, continues Mr. Ball, prevalent among gold and diamond washers that after a rest old tailings become again productive in consequence of the growth of the gold and diamonds, but the explanation of the fact that rewashing is sometimes productive is, he considers, that in the majority of cases under the influence of the atmosphere decomposition and disintegration of enveloping minerals and hard crusts take place, in consequence of which the diamonds or gold are released from their concealment, and appear and are collected in the later washings.

Mr. Ball then goes on to say that as we know so little about diamonds it is impossible to speak positively concerning them, but the possibility of gold becoming concentrated in certain spots, and even forming nuggets in alluvial deposits, is pretty generally admitted, being susceptible of a rational chemical explanation, as certain chemical solutions, more especially those containing iron sulphate, are capable of holding gold in solution to a small extent. When such a solution comes in contact with decomposing organic matter it is liable to be deoxidised, and iron sulphide or pyrites is deposited, and with it metallic gold. This process may go on for long periods, and by minute increments the gold may be said to grow; of course if the gold be included in the crystals of iron pyrites, and the latter be not removed by subsequent oxidation and solution, then no actual growth of a nugget can take place, but there is reason to believe that sometimes the gold is deposited free from the entanglement of the pyrites. Silica, moreover, when in the haloid state is known to be to a small extent a solvent of gold, and to this fact where pyrites is not associated the presence of free gold in quartz veins may be attributed. Another possible agency in the concentration of metallic gold is the action of living plants. In this way it is conceivable that nuggets may grow by gradual increment, and the possibility being admitted an explanation is afforded of the curious cases which have been recorded.

LITERARY RECORD.—The March number of Trübner's American, European, and Oriental Literary Record contains interesting notices of the Chinese Divine Classic Nan-hua, being the works of Chuang Tsze, by F. H. Balfour; of Mr. Anondoram Borooah's new Sanskrit Grammar; of the Revenues of the Mughal Empire in India; of Ceylon Archæology; of the series of German Philosophical Classics in English, about to be issued by Messrs. Griggs and Co., of Chicago, edited by Dr. G. S. Morris, of the University of Michigan and Johns Hopkins University; and of recent special and general bibliography. There are also the usual obituary for the two months, and list of American and Oriental books.

BRITISH AND CONTINENTAL ELECTRICAL DIRECTORY.—In a volume of nearly 250 pages bearing this title Mr. J. A. Berly, of New Bridge-street, has given some information which will be of great utility to all interested in the introduction and application of electricity to the purposes of every day life. Those who have constantly made the industrial application of electricity were naturally at a loss to guess where Mr. Berly would find material for such a work as he announced, but they have now a very satisfactory solution. They will find that the number of trades directly and indirectly connected with the application of electricity is really enormous, for asbestos merchants, boiler non-conducting composition makers, cotton waste merchants, glass blowers, map and chart sellers, opticians, and photometer makers, coming among the number. There is a chronological sketch of the progress of electrical discovery which will become highly interesting when filled up in subsequent years. That of the various systems now before the public the Brush is that which has the best claim to permanent adoption has frequently been stated in the *Mining Journal*, and the enormous number of the Brush lights in use, their economy, and their simplicity, has done much to confirm this view. Still further evidence is afforded by an observation in Mr. Berly's notes. He states that the tenders for electric lighting in the City were 1410*l*. for the Brush, 2930*l*. for the Jablochkoff, and 3720*l*. for the Siemens. The districts were adjudicated at these prices, but the Jablochkoff subsequently withdrew. Mr. Berly's volume, in addition to the directory matters, contains a large amount of information connected with the subject, so that it is really an electrician's *vade mecum*, and as such will not fail to secure a good circulation.

means of suitable commutators on the crank shaft and connections to exploders at each end of the cylinder, produces electric sparks for exploding the charges of mixed air and hydrocarbons as soon as the proper quantity thereof has been introduced into either end of the cylinder, whereby the usual reciprocating motion of the piston is effected.

UTILISATION OF BLAST FURNACE SLAG.

With a view to the rapid and cheap conversion of fluid slag, and its solidification into such shapes as to materially facilitate its utilisation, an ingenious invention has been patented by Mr. A. D. ELBERS, of Hoboken, New Jersy. Slag from the modern large furnaces at which the invention could be carried out to greatest advantage generally contains rather less than more than 40 per cent. of silica, its glassy or vitreous character is, therefore, not so pronounced as to ensure after solidification under ordinary treatment such a state of vitrifaction and compactness as may be desirable. As slag is neither a compound especially concocted with a view to its ultimate form or usefulness, nor of sufficient value to allow of expensive treatment, such as reheating and annealing, its conversion into rather primitive but still sufficiently uniform and suitable products for the utilisation of large masses has to contend with the disturbing influences well known to all metal founders, almost simultaneous shrinkage of the still liquid and irregular contraction in cooling of the solidified parts. Usually the slag is allowed to run from the furnace through gutters or along a chute, and as it runs on the ground into furrows it becomes quickly chilled on the surface, while from under the still liquid slag runs onward and breaks out in new streams, which in their turn become crusted over, or it is run into tubs or cars, allowed to cool therein, and then dumped on the cinder banks. In either case the slag is liable to solidity into irregular honey combed crumbling pieces which disintegrate under exposure, and if used on road beds occasion considerable dust; at best it assumos a somewhat denser and stone like appearance, but even then has little strength or solidity. Aside from the influences of shrinkage and contraction afore mentioned, these conditions are also owing to disturbances of vitrifaction on account of the heat which is sent forth from the underlying and still liquid mass to the already solidified portion above it, because the same quality of slag may be made nearly as hard as flint glass if it is suddenly chilled in small particles, as, for instance, the highly vitrified globules which are formed during the conversion of the liquid slag into so called mineral wool.

The apparatus consists of an annular trough or gutter of suitable width and size sustained by hanger from spider arms that are sustained on a post, and fitted for revolution by any suitable mechanism. He allows the fluid slag to spread swiftly in the revolving gutter, which by preference is made in adjustable sections, and of iron or steel plates, into which it flows by a spout, which by preference is made movable, so as to direct the course of the flow. The apparatus to which the gutter is fastened in any convenient manner is best constructed in the form of a so-called carousal, which can be quickly turned even by hand power, and the necessary size of the apparatus depends on the quantity of slag, which is to be run into the gutter. After the apparatus is set in motion the first layer of the slag as it flows from the trough into the revolving gutter will almost instantly become chilled by contact cooling with the bottom and sides of the gutter, while the subsequent layers have to be mainly solidified by the rapid air circulation on their surface. As the liquid slag unites or welds readily with the underlying already solidified, but still very hot slag, a satisfactory weld of all the layers as they accrue during rotation (the hotter strata always on top) is to be expected, as well as a comparatively uniform contraction of the united mass. The material thus obtained by this new method is apt to be dense, comparatively proof against disintegration, similar in tenacity and compactness to hard baked stoneware or pottery, more or less vitrified, and of glazed appearance, where it has been in contact with the gutter surface or facings.

The material obtained by this method is dense, comparatively proof against disintegration, similar in tenacity and compactness to hard-baked stoneware or pottery, more or less vitrified, and of glazed appearance where it has been in contact with the gutter surface or facings. As to its utilisation, one of its most extensive applications may be for railroad ballast under and between ties; if it is cast into the shape of gutters or troughs, these may be used in culverts and in underground telegraph and steam heating constructions. As a material for jetties, dams, and similar works where the filling in of a volume at a minimum weight may be desirable, the slag can be run in small streams into the rapidly revolving gutter, so as to form fascicular bulky masses of irregularly shaped threads highly vitrified, which may also be used for filtering-beds in water reservoirs, &c. The shape of the material may, therefore, be that of solid blocks, of slabs, sticks, hollows, or of any forms which can be obtained in the revolving gutter by indentations, projections, and other well-known contrivances which are used in casting and in removing casts. The slags may while accumulating in the gutter be subjected to the action of steam, water, or air blasts, or granulated slag, ashes, or other materials may be allowed to run into the revolving gutter so as to mix with the liquid slag, and thereby form conglomerate products. The gutter itself may consist of different and many pieces which may be put together or taken out as occasion may require, and instead of being fastened to a carrousel or revolving spider the gutter may be placed on a turn table, or several gutters alongside of each other (or arranged in such manner in the circumference of the apparatus as to receive the slag from a movable trough or from other channels) may be provided without affecting the result otherwise than in degree.

LOCOMOTIVE ENGINES FOR TRAMWAYS.

The aim of the invention of Mr. D. MCINTOSH REID, of Assensole, India, is the construction of a light locomotive that will admit of the efficient working of tramways by starting and stopping more quickly and running at a steadier speed than horse power could give. The boiler is vertical, and is about 4½ ft. or 5 ft. in height, and consists only of a round fire box, which has a series of direct heating surface vertical tubes arranged round it, passing from an auxiliary water space at the bottom of the boiler up through the fire box, and into the roof plate in the ordinary way. The use of these direct heating surface tubes adds so much to the steam generating power of the fire box as to admit of indirect heating surface tubes being entirely dispensed with, and consequently of a much smaller and lighter boiler being employed for the power of the engine. The auxiliary water space at the bottom of the boiler is used as a fire bar frame. This admits of every inch of fire box and tube surface being employed. Above the roof plate there is a steam and water space of about 1 ft. in depth, through which the fire door and chimney flue pass, there being one or two small holes at the sides through which fire irons can be used. The fire door being on the top of the boiler and the fuel on the same level, the working of the engine is simplified, and it admits of one man attending to all with ease. A shovel not being required in firing a small door is sufficient; the chimney flue being also comparatively small, there remains, notwithstanding their position, ample steam and water space over the roof of the fire box. There is a smoke burning fire brick suspended from the roof plate between the fire door and chimney hole. A light square frame with two light plates fixed about 1 foot frem the side plates as inside framing compose the body of the engine. The boiler is fixed to the two inside frame plates. Two of the wheels are a little smaller than the ordinary tram car size, the other two, being the driving wheels, are larger. The engines are coupled to each side of one of these wheels, the cylinders being fixed to the outside and inside of the two frame plates of one side only above one of the small wheels. The valve chests being between the out and inside framing, the valve gearing is also arranged there, the eccentrics being close to each side of the driving wheel, while outside and inside the two framing plates of the same side are situate l the two driving cranks.

The machinery of the engine being compact it is easily encased and protected from dust. All the wheels are on the ordinary independent tramway principle, but there is a coupling on the axle of the driving wheels that admits of the adhesion of the two wheels being employed when the wheels are slippery. The engine pushes the car in the rear, and is by a simple arrangement under the control of the conductor who rides in front of the car, and can shut off steam and apply the steam brake from there in, say, a second. The starting of the engine is also under the conductor's control. The engineman has a second regulator valve under his control. by which he can stop or regulate the engine when slipping, &c.; but while either of the regulator valves are shut, steam is shut off from the engine. The engineman can arrange his engine so as to be able to leave it for a few minutes and take the place of the conductor while fares are being collected, or he can look out from his engine, where he has the same control over it. The steam brake is composed of a horizontal cylinder, from which there is an arrangement for the car brake as well as the engine brake being applied by it. Ordinary tram cars without any alteration are suitable; but an alteration might be effected with advantage—that is, to have the car wheels arranged so that one could be advanced on the outside rails of sharp curves, or when passing through points, which when horse power is employed require the car to be pulled to the side; this can by a simple arrangement be also placed under the control of the conductor. The wheel base of the engine being very short, and its wheels also being all independent of each other, the sharpest curves are no impediment to it.

CERTALDITE—ARTIFICIAL MARBLE.

An improved process for indurating or hardening and colouring articles composed of materials having sulphate of lime as their base—such as blocks of gypsum, or plaster of Paris, alabastrite, and the like—has been patented by Messrs. REY and CROSNIER, of Paris. In order to dehydrate the articles or materials, whether they be in a rough or uncut condition or in a manufactured form, they are baked in a stove or other drying apparatus without being brought into direct contact with the fire. The duration of the dehydrating process and the degree of temperature employed will vary according to the nature or grain and the dimensions of the article or material being treated. In the case, for example, of the gypsum obtained from Certaldo, in Italy, when in the form of blocks or manufactured articles, an exposure to a temperature of from about 110° to 120° centigrade for a period of about 12 hours will usually be found sufficient. Blocks or articles made of plaster of Paris also require baking for about 12 hours. But the temperature in this case must be from about 150° to 170° centigrade. When treating blocks or articles exceeding about 1 in. or 1½ in. in thickness the operation will require more time, and is known to be completed when a fracture of the block presents a uniform white colour throughout.

When the process of dehydration is complete the block or article is left to cool for one or two hours, and is then immersed in a bath in order to be hardened or indurated. The substances employed in the preparation of this bath are salts of magnesia, carbonate of potash or soda, sulphates of iron and copper, alum, nitric, sulphuric, acetic, or oxalic acids, ammonia, bichromate of potash, potash, cyanide of potassium, acetates, oxalates, sulphates, nitrates, carbonates, or the equivalents of these which will not decompose gypsum or plaster of Paris, and are capable of imparting hardness thereto, such substances combining with the gypsum or plaster of Paris, and either by filling the spaces which, before dehydrating, were occupied by the molecules of water or by becoming chemically blended with the elements of the said gypsum or plaster of Paris. The substances employed in the preparation of the bath are selected according to the nature of the reactions which take place when the said substances are brought into contact with gypsum or plaster of Paris, their effect upon the stability and fixing of the colours when colouring matters are employed being also taken into consideration. By the treatment described the desired degree of hardness is imparted to the materials to be converted into artificial stone or marble The said materials may be submitted to the indurating action of the bath either in a rough or unwrought condition, or after they have been wrought or formed into the shape of the finished article.

PREVENTING RED SHORTNESS IN BESSEMER METAL INGOTS.

It is of particular importance in the Bessemer manufacture to produce ingots both compact and free from bubbles. By means of strong working, and stretching by way of hammering or rolling after welding, one may certainly improve the metal in porous ingots, but it cannot be converted into such a high class article as if the ingots had been free from pores or air-holes from the beginning; such treatment, moreover, occasions great expense. When castings are to be produced which are not to be subjected to further treatment before being finished, it is of course of a still more palpable advantage and importance to obtain an article free from pores. Many endeavours have also been made for producing steel free from pores, even with a partial success, such as the Whitworth and the Terre-Noire method. It is claimed that compared with these the method patented by Dr. HENRIK THOLANDER, of Forsbacka Ironworks, Sweden, is more simple and more direct, and thus cheaper both with regard to the constructions of the apparatus and to the mode of working. The molten Bessemer metal before being poured into the mould is exposed to a vacuum—as it will be denominated throughout for the sake of brevity, although it would be more accurate to say to the minimum of atmospheric pressure, or a partial vacuum, and the gases which are thereby caused to evaporate are removed. The vacuum is to be produced in the converter itself, in which the metal is kept for some time after the process of smelting is over, before it is emptied out of it in one of the usual ways. In the opening of the converter, or if a so called converting chamber is used, in the upper free end thereof an ejector is placed, which is worked by a fan, or by steam of sufficient pressure; or the converter (or the converting chamber if such a one is used) is closed by a cover, and connected afterwards with a separate ejector or an exhaust or suction fan of suitable construction. In the same way as other liquids the overheated Bessemer metal melted into a thin fluid mass in a vacuum evaporates with a certain violence the gases which have been absorbed by it when exposed to a higher pressure. Although in practice for many reasons an article absolutely free from gases cannot be produced by means of a converter vacuum, the tension of the remaining gases is nevertheless so much lessened that they can no longer separate themselves when after the evacuation is completed the full atmospheric pressure is allowed to act on the metal, but remain fully dissolved therein, and form no bubbles or air holes.

Another advantage gained by the vacuum process is that the red shortness of the Bessemer metal, as far as this is occasioned by the presence of oxidised iron in the metal, is diminished, because the oxidised iron dissolves itself on account of the high temperature in the converter into metallic iron and oxygen, which latter evaporates in one or another gas formation. According to one suitable mode of carrying out the invention, the converting chamber is fitted with an ejector, and has on its upper part a dish or collar of cast-iron, into which by means of a luting consisting of fine ground quartz or "chamotte flour" (powdered brick) and clay, and by means of screw bolts, an iron ring is pressed in air tight; this ring is fastened to a sheet-iron helmet or cap, which is lined with fire-proof material. Through said dish or collar, fitting as closely as possible, the leading or guiding rod runs to a branch from a chambered interior rod, and is made hollow in order to serve as blowing pipe in an injector, the delivery mouth piece of which is placed in the helmet or cap covering the converting chamber precisely in the middle above the leading rod or blowing pipe, and an air pressure or steam pipe is connected to this when evacuation is to take place. In order to increase the efficiency of the ejector a funnel of sheet-iron is attached to the delivery mouth piece when evacuation is to take place. The mouth piece may have a current of steam or air applied on its outer side to increase the suction. The leading or guiding rod may of course also be made solid, as is the usual way, and the ejector be attached quite apart from it to the converting chamber or its cover. If a converting chamber is not used the ejector ought to be fixed with a suitable luting direct to the opening of the converter.

Two or more outlet mouthpieces may be used where a strong current must be maintained, rather than to increase the delivery opening of a single ejector in a corresponding degree. On tapping out the Bessemer metal, even if made absolutely free from gases before the tapping takes place, bubbles may be therein produced, if air is pressed down into the ingots by the stream of metal, which is the more the case the higher the fall is in the open air, and the quicker the metal runs out from the tap hole. This air oxydises the iron, and the iron thus oxydised mixing with carbonic iron turns into carbonic acid, which certainly may evaporate, while the metal remains liquid in the mould, but which otherwise, at least to a certain extent, remains collecting together in bubbles in the blooms. In order to avoid this inconvenience it is advisable to adopt the methods used in many places in regard to Bessemer metal—viz., to place a funnel or a basin over each mould, close beneath the converting chamber, in which the metal is first poured, and from whence it runs down into the mould with decreased speed.

This basin should so completely cover the opening of the mould that space is only left sufficient for allowing the gases to escape which are in the mould when it is filled up, because the mould will in this way be kept filled with gases, consisting chiefly of carbonic acid formed by the burning of the black lead, birch bark, smoke, or something of the sort, wherewith the moulds are generally covered, or else they are such as evaporate from the metal, be it to a small amount after the evacuation, wherefore it is evident that no air can be pressed down by the metal stream, but only gases to which the Bessemer metal is indifferent, and which when they get down into the metal are not absorbed, but immediately rise to its surface.

MANUFACTURE OF STEEL FROM PYRITES RESIDUUM.

The importance of the manufacture of steel from the residuum of pyrites-roasting furnaces will be readily understood when it is considered that in France, England, Belgium, and Germany, upwards of 8000 tons of pyrites are annually consumed, producing after roasting in the furnaces upwards of 525,000 tons of peroxide of iron, containing less than 1 per cent. of sulphur, and which constitutes, after being treated and purified according to this invention, a very rich iron ore, valueless for the manufacture of chemicals, and which has hitherto been neglected by iron manufacturers on account of its friability, which causes it to fall to a very fine powder and to obstruct the blast furnace, and especially on account of the metalloids it contains which render the iron brittle. The object of the invention of Mr. CLEMENT MARTIN, of Bleyberg-Montzen, Belgium, is to utilise the iron contained in the said residuum by transforming it directly into steel of different degrees of carbonisation, and it consists of the processes hereinafter described for the treatment, purification, and reduction of the said residuum. When the residuum of the pyrite-roasting furnaces contains more than 1 per cent. of sulphur it should be roasted again, in presence or not of oxidising or desulphurising agents to deprive it of its sulphur. The residuum of the pyrites-roasting furnaces containing less than 1 per cent. of sulphur is reduced to powder; it is then placed upon sheet iron plates perforated with holes of about 1-25th in. in diameter, and is washed in a trunk or vessel mounted upon fixed or shaking tables so as to enrich it, or it may be simply washed or cleansed in cases or tanks through which a stream of water is caused to flow so as to enrich the residuum by depriving it of its earthly parts and of those which are soluble in water.

The residuum or ore thus prepared is then mixed with coal or suitable carbonaceous matter, in proportions varying according to the quantity of iron it contains, and the degree to which it is carbonised. To the mixture of ore and coal is then added very unctuous clay and lime, or any other like material capable of forming a very fusible flux in proportions varying according to the physical state and the chemical nature of the ore. The mixture or mass thus obtained is moistened with water rendered alkaline or acid as required, and then is converted into blocks or cakes by being subjected to powerful hydraulic or other pressure in cylindrical or other moulds. The said blocks or cakes having been dried are introduced into a furnace, hereinafter alluded to as the calcinating and reducing furnace, in which they are for a suitable time exposed to the influence of heat and a reducing atmosphere. The iron contained in the said blocks or cakes under the influence of the elevated temperature in the calcinating and reducing furnace is reduced, a portion of the lime combines with the sulphur and phosphorous, whilst part of the unctuous clay agglutinates and greatly hardens the mass and increases its density, and parts of the same are scorified with the gangue and lime, forming with them a most fusible scoria or slag, which is removed to the melting furnace in which the next operation is effected. The next operation is carried on in a melting furnace (or other suitable apparatus) heated by ordinary fuel, or in which the fuel is gasified and used in the state of gas. The said furnace or apparatus, the concave sole of which has been previously charged with the highly fusible scoria or slag produced in the calcinating and reducing furnace hereinbefore described is heated to a bright red heat. The blocks or cakes. also heated to a bright red heat, are introduced into the bath of melted scoria or slag by means of a self-acting duct without any loss of heat, and sink into and are immersed in it by their own weight.

Under the influence of the elevated temperature of the furnace, from which free oxygen is excluded, the reduction of the iron is completed, whilst at the same time it is carbonised by means of the surplus coal which has not served for the reduction. The gangue forms with the lime and clay, forming part of the blocks or cakes introduced into the bath, a basic scoria or slag, which entirely covers the melted metal and preserves it from oxidation, and owing to the silica it contains, and also to its chemical properties, it becomes a powerful agent of desulphuration and dephosphoration. When all the chemical reactions hereinbefore described have been effected the operation is terminated, and the scoria or slag having been removed from the furnace the steel is run into suitable ingot moulds for use as required. The processes and operations described are also applicable to the manufacture of steel from ordinary iron ores.

SENTEIN.—The profits on the working of this mine, as shown by the accounts issued some time ago, amounted to 1517*l.* 6s. 10d., for nine months up to Dec. 31, obtained under disadvantageous circumstances, as it was only a period of proper organisation and development, the benefit of which is now being felt. The mine is reported to be looking splendid throughout, and everything is now considered to point to success.

WEST VOR AND LEEDS UNITED.—This grant, containing all the principal lodes of Great Wheal Vor, which have already been intersected, and most of them yielding good tinstuff fit for the stamps, is considered to hold out every prospect of success. An important feature is the great cross-course, which made the fabulous wealth of the Great Vor, also traverses the Great Vor sett, embracing all the same lodes on the western side of the said cross-course, which are now about to be developed with vigour and energy, one of the lodes having already yielded 130,000*l.* from a depth of only 120 fms., is in itself some guarantee of success.

CATHEDRAL CONSOLS.—An important discovery of rich copper ore has just been made in driving the 50 west. The ore is of the richest quality, composed of grey, red oxide, and green carbonates, assaying about 40 per cent. Indications of further improvements point to an early reward of the shareholders for their outlay

ENGLISH CAPITALIST wishing a CORRECT REPORT on the SILVER MINES of COLORADO will do well to apply to—
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Special Polishing Machinery and Materials.

SPECIAL ELECTRO-DEPOSITING SOLUTIONS

For depositing **Copper in any thickness upon** rough castings or polished **Iron** objects of any size or weight, Locomotive Boiler Tubes, Iron Railings, Ornamental Lamp Posts, Garden Seats, Iron Sheets, and parts of heavy Iron Structures.

For depositing **Brass upon** Ornamental Iron Work, Fenders, Fire Irons, Locks, Bright Steel Goods, and upon articles made of **Lead, Pewter, Zinc, Tin,** and **Britannia Metal.**

For depositing **Tin** upon Bright Steel Goods, or **upon** rough Iron. The insides of **Iron** or **Copper Pans,** Kettles, and Culinary Utensils (Chemically pure).

For depositing **Copper** reproductions of **Art Subjects, Stove and Door Panels,** Plates, Medallions, &c., from Plaster, Wax, or other Moulds.

For Covering the most delicate **Ferns, Flowers, Insects,** &c., by which perfect facsimiles can be obtained in **Copper** and finished in **Silver, Gold,** or other Metals, or various coloured oxides, forming the most elegant ornaments which can be manufactured at a nominal cost.

For depositing **Electrotypes** for Printers, Steel Plate and Bank Note Engravers, &c.

For depositing **Steel** or **Nickel upon Copper Electrotypes,** to protect the surfaces from the action of Mercurial Inks, and at the same time preserving the clear brilliancy of vermillion, and other colours having mercury in their composition.

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Fer depositing **Gold, Silver, Nickel, Bronze, Zinc,** &c., in **Electro-Plating.**

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ENTIRE SYSTEM COMPLETE, EFFICIENT, AND INEXPENSIVE.

Special Apparatus for the application of Ozone and other Gases for Bleaching Oils, Sugars, Fabrics, &c.

Complete Outfits. The "Elmore" Machines and appliance for TIN-PLATE MANUFACTURE.

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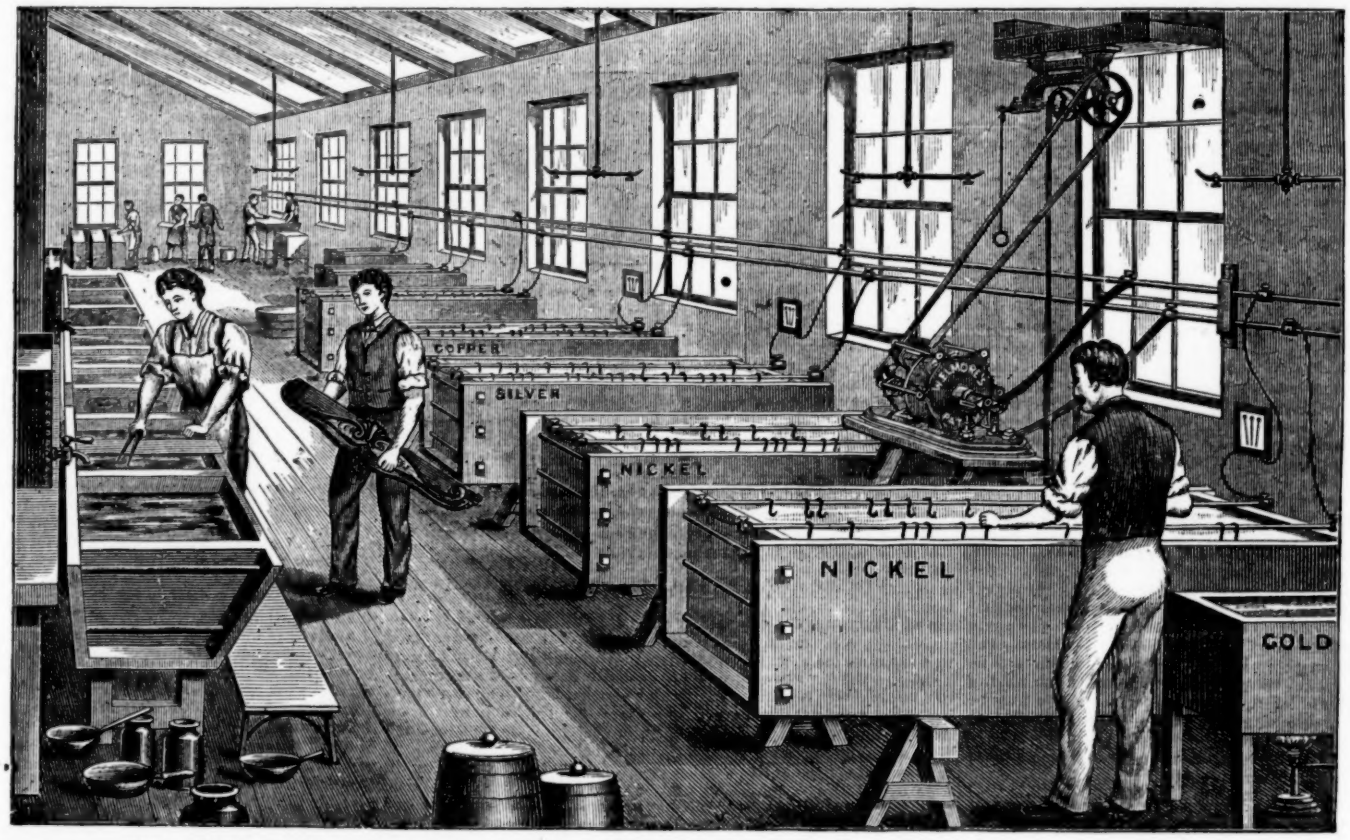
Complete Outfits. The "Elmore" Machines and appliance for REFINING METALS.

Complete Outfits. The "Elmore" Machines and appliance for EXTRACTING METALS FROM ORE,

Complete Outfits. The "Elmore" Machines and appliance for GENERATING OXYGEN, Hydrogen, Chlorine, Ozone, and other Gases.



The above represents an Electro-Plating Works in which an "ELMORE" PATENT DYNAMO-ELECTRIC MACHINE is being used for the simultaneous deposition of Nickel, Silver, Copper, Bronze, Brass, Gold, Tin, Zinc, &c., from their Solutions.

TESTIMONIALS, &c.

From the "HARDWARE TRADE JOURNAL."

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"Mr. WILLIAM ELMORE, of 91, Blackfriars Road, London, S.E., is busily engaged fitting up the Art Metal Depositing Works of the Electrolytic Company, Charlotte Street, Blackfriars. The Electro-plating tanks of nickel, copper, brass, zinc, and tin, holding several thousands of gallons each (worked by an 'Elmore' Patent Dynamo-Electric Machine, capable of depositing about 500 lbs. of metal per day), and the specially designed and constructed polishing machinery will all combine to constitute this most gigantic and complete arrangement of the kind in the world. Here boiler tubes, each over 20 ft. in length, may be coated with copper, large ornamental iron lamp posts, and similar massive iron structural objects of great weight may be covered with electro-deposited copper, forming, when finished, a complete shell of bronze, which may be nickel-plated, or even silver-plated, if desired. Large rough or polished iron surfaces may be coated with brass, or zinc, or tin. Copper electrotype copies are taken of art subjects, the reproduction being so perfect that the process is used for multiplying plates from which bank-notes are printed, and the most delicate ferns, flowers, leaves, and insects are coated with copper, and afterwards with gold, silver, nickel, &c., for use as ornaments of various kinds. Fenders, fire-irons, grates, &c., may be brassed. The largest marine engines may be nickel-plated in the large nickel-plating plant, worked by the powerful 'Elmore' machine with ease and certainty, which only a few months since would have been pronounced almost impossible. The Electrolytic Company, we understand, express perfect satisfaction with the work already completed by Mr. Elmore, and there is no doubt that with that gentleman's large practical experience the company could not have been in better hands. The entire premises will be lighted by the 'Elmore' system of electric light."

From the "LONDON MINING JOURNAL."

"The new 'Elmore' Dynamo-Electric Machine can be seen in operation in London, and is considered one of the most wonderful scientific apparatus which has yet been brought before the public; it should be inspected by all who are interested in any kind of metallurgical operations."

"Mr. ELMORE has just received two pieces of ordnance from Her Majesty's Works at Chatham, with an order to nickel-plate the same, together with the carriages upon which they are mounted. Mr. Elmore has done similar work for the Government on previous occasions, and it will be remembered that the screw propellers used on the torpedo boats were nickel-plated by him. The 'Elmore' Dynamo-Electric Machines and complete electro-plating outfits have been supplied to Government Departments at home and abroad."

From the NICKEL PLATING COMPANY, 13, GREEK STREET, SOHO.

". . . . . Your Machine does *its work most satisfactorily, and has never once reversed current,* which the Weston Machine frequently did." . . . . .

From the ELECTROLYTIC COMPANY,

ART METAL DEPOSITING WORKS, CHARLOTTE STREET, BLACKFRIARS, LONDON.

"The *'Elmore' Dynamo-Electric Machine* and entire outfit which you have supplied to this company have given perfect satisfaction." . . . . .

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"We have much pleasure in expressing our entire satisfaction with the nickel-plating solution, anodes, and Dynamo Machine that you have supplied us with.

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"The quality of the nickel solutions and anodes at these works, which were supplied by you, is most satisfactory in every way. . . . . The Dynamo Machine also works excellently, and has given no trouble whatever since it has been started."

AND MANY OTHERS.

Dynamo-Electric Machines, Outfits, &c., supplied to (London) Messrs. Thos. De la Rue and Co., Cassell, Petter, and Galpin, The India Rubber Company (Limited), Silvertown, The Nickel Plating Company, Joseph Woodricka, Kelly and Co., A. S. Cattell and Co., &c., &c., (Birmingham) Messrs. Wright and Butler, Joseph Woodward, The Griffin Gilding and Plating Company, and over 500 others.

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OWEN VEAN AND TREGURTHA DOWNS MINES (LIMITED).

Incorporated under the Companies' Acts 1862 and 1881, whereby the liability of each shareholder is strictly limited to the amount of his shares.

Capital £60,000, in 60,000 shares of £1 each.

Payment as follows:—

2s. on application; 3s. on allotment; 5s. one month after allotment; and the remainder as required, in calls not exceeding 5s. each, with not less than one month's notice.

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GEORGE BROCKELBANK, Esq., Director of the General Steam Navigation Company; Chairman of Wheal Hony and Trelawny United Silver-Lead Mining Company (Limited).

EDWARD PALMER, Esq., Director of Wheal Hony and Trelawny United Silver-Lead Mining Company (Limited).

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SECRETARY AND MANAGER.

Mr. H. R. LEWIS.

OFFICES.

BARTHOLOMEW HOUSE, BARTHOLOMEW LANE, E.C.

PROSPECTUS.

This company is formed for the purpose of acquiring the licenses and grants of and vigorously developing and working the extensive and valuable run of tin and copper lodes in the Owen Vean and Tregurthua Downs Mines, situate in the heart of one of the richest mining districts in Cornwall—viz., the parishes of St. Hilary and Perranuthnoe, near Marazion.

The productiveness of the district in which Owen Vean and Tregurtha Downs are situate has already been proved by the returns of tin and copper ore made not only from the same lodes, but from the mines immediately surrounding.

The company, on the completion of the purchase, will be owners of two mines (which at shallow depths are stated—see accompanying reports—to have made large returns of tin and copper ore). The mines can be easily and economically worked under one management, are well proved, and with valuable lodes running through the properties, shafts sunk and adits driven, the risk of failure is reduced to a minimum.

The Tregurtha Downs sett is large, extending, with Owen Vean, more than a mile in length on the course of the lodes, and nearly the same in breadth. Several valuable lodes of tin, three of copper, and a so a cross lode of silver-lead, traverse the property, and it is believed that large quantities of ore can be raised when the necessary machinery is erected and the mines drained.

The mine is situated in killas, near to its junction with the granite, a stratum highly congenial for the production of mineral, and of the easiest and cheapest description for sinking and driving.

Three of the principal tin lodes form a junction eastward, and at the point of intersection there is but little doubt that large deposits of mineral will be met with. The workings have been very shallow, the greatest depth to which the engine-shaft has been sunk being only 60 fathoms. To those who are conversant with mining it is unnecessary to say that this depth—viz., 60 fathoms, is trifling in comparison with the rich deep mines of Cornwall; many of these only began to be productive at 50 or 60 fms., the many millions of pounds sterling yielded by them having been made from depths up to 360 fathoms

It is the intention of the directors to extend the deep levels opened in Tregurtha Downs, little having been done below 35 fathoms on engine-shaft lodes, or below 37 fathoms on flat-rod lode. When deeper levels are brought in the directors confidently believe that paying quantities of tinstuff will be raised, and large profits realised.

The Owen Vean sett immediately adjoins Tregurtha Downs on the west, the same lodes running through the sett, and in the same congenial mineral bearing geological formation.

The deepest point reached in flat-rod shaft is 80 fathoms, and a large amount of valuable work has been executed, and is now available for this company. The tedious and costly dead work which must necessarily be done on first opening out any mine (and which in Owen Vean and Tregurtha Downs would require at least three years to accomplish) is already effected, and the mine is already opened, so as to become productive as soon as the respective levels are drained.

The reports accompany the prospectus from agents of great experience and high respectability, well acquainted with the above mines and with the district in which they are situate and from practical miners who have worked in the setts, as also the large returns of ore yielded at shallow depths, present copious and conclusive evidence of the mineral richness of the properties themselves and give a just and well-founded confidence that with the advantage of the most approved modern appliances and the consequent speedier development and economy in working large profits will be made.

Special attention is drawn to the following extracts from the reports:—

Captain Rich, the manager of South Condurrow and other mines, says:—

"Judging from the débris lying about and from the extent of the old works there are undoubted evidences that this north lode has been rich for tin in times gone by close to surface. I am told it has not been intersected in any deep workings."

Captain Prisk, the manager of the Lovell Mine, the Phœnix United Mines, &c., says:—

"Notwithstanding the large quantity already sold the refuse now on the mine will pay to return for tin, which is a proof that the workings below ground must be rich for this metal. Some rich stones produced 3 cwt. to the ton. The geological position cannot be surpassed. I do not know another such property in the county that offers such chances of success."

Captain Tregoning, the manager of Wheal Jewell Mine, who worked in Tregurtha Downs when his late father was agent there, says:—

"I beg to express my opinion that no piece of mining ground in the district holds out more promise of future yield of minerals than Tregurtha Downs and Owen Vean."

Captain Charles Thomas, the manager of Cooks Kitchen and Wheal Friendship Mines, says:—

"I do not hesitate to recommend the mines as a sound and good mining speculation."

Mr. Verrant James, of the Trevelyan Arms, Goldsithney, says:—

"I beg to tell you that in the years 1877 and 1878 I worked in the western part of Tregurtha Downs sett as a tributer by paying the lords' dues. I found it a very rich piece of ground, and rose with my single pick 1½ ton of tin a month by employing four men to draw the water below the adit level. I was at last driven out by the water, and not able to go more than 13 fathoms deep in the driest summer, but I know from experience that the whole run of the sett is full of tin ore, as may be seen by what is taken away, and what is now to be seen in the rubbish that is left."

Capt. Curtis, the mineral agent of the Duke of Leeds, says:—

"If the operations are carried on with vigour on the various tin and copper lodes I have no doubt Owen Vean and Tregurtha Downs will be a good and lasting concern."

The vendors are the promoters of the company, and the price has been fixed by them at £25,000, of which £8334 is to be paid in cash and £16,666 in fully paid up shares of the company.

The vendors will defray all costs and expenses of advertising, printing, and all legal and other charges incidental to the formation of the company up to the allotment of shares.

The following contracts have been entered into—viz., one dated the 31st December, 1881, between William Derry of the first part, Matthew Loam, Michael Loam, and William Hancock of the second part, and Henry Ryan Lewis of the third part; and one dated the 28th February, 1882, between the said William Derry of the first part, Matthew Loam, Michael Loam, and William Hancock of the second part, Henry Ryan Lewis of the third part (hereinafter called the vendors), and William Slee Wellborne, as a trustee for and on behalf of a company then about to be incorporated (being this company) thereinafter called the purchaser of the fourth part.

The reports accompanying the prospectus give the fullest information as to the value of the properties which it is possible to procure. The contracts, Memorandum and Articles of Association and reports and plan of the properties can be seen at the offices of the solicitors of the company.

Prospectuses and forms of application for shares may be had at the bankers, brokers, solicitors, or at the offices of the company.

TO MINE AGENTS, CONTRACTORS, AND OTHERS.

VALUABLE CONTRACTORS' PLANT

FOR SALE, BY PUBLIC AUCTION, TUESDAY, MARCH 21ST, 1882, at 12·30 A.M. precisely.

MR. W. T. DAVEY, Auctioneer, &c., Redruth, is instructed by Messrs. McCULLOCK and CUMMINS, TO SELL, BY PUBLIC AUCTION, on Tuesday, March 21st, 1882, at 12·30 o'clock precisely (in suitable lots) at Wheal Uny Mine, Redruth, Cornwall, and in a yard adjoining the Redruth Tin Smelting Works, where the complete and first-class patent "Eclipse" Rock Boring Machinery (by Hathorn and Co., London), and McCulloch's patent carriages for carrying two drills each have been removed for convenience of sale at Wheal Uny Mine, near Redruth, Cornwall, viz.:—

One (nearly new) patent 10 in. Reliance Air-Compressor (by Hathorn and Co., London) on cast-iron bed acting as receiver, complete with two steam cylinders (each 8 in. diameter), disks, safety-valves, pressure gauge, &c. (weight about 5 tons). This compressor is in perfect working order, and was purchased new about 12 months since.

One patent 9 in. Reliance Air-Compressor (weight about 4½ tons), new about 18 months since (by Hathorn and Co.).

One Air-Receiver 37 ft. long, 4 ft. 6 in. diameter, complete with safety-valves, cocks, &c. Lot of spanners, &c.

In Yard adjoining the Redruth Tin Smelting Works, viz.:—Two patent Eclipse Rock Boring Machines (3 in. diameter, by Hathorn and Co.).

Three ditto patent Eclipse Drills fitted with McCulloch's patent tool holders.

Two ditto patent Eclipse Drills 3½ in. in diameter.

The above drills have been purchased recently, and are in thorough good working order.

Two new Rock Drill Carriages (McCulloch's patent) to carry two drills each (complete).

Five wrought-iron clamps to fit 4 in. stretcher bars (complete).

Two new Stretcher Bars 4 in. diameter, about 6 ft. long, fitted with steel screws and claws (complete).

One new patent Eclipse Tripod with weights, spanners, &c. (complete), one new wrought-iron Leg Vice, one good Ratchet Brace, one new and complete set of Stocks, Dies, Taps, and Wrenches (Whitworth thread) from ⅛ to 1½ in. fitted in polished deal case.

One set of Stocks, Dies, Taps, and Wrenches (gas thread), ⅜ and 1 in., in polished deal case.

One set of Stock, Dies, and Taps, ¼, ⅜, and ½ in. (Whitworth thread), copying press, and miscellaneous other articles.

The Reliance Air-Compressors and Rock Drill Boring Machinery will be found in good working order, the whole of which is worthy the attention of intending purchasers, having been bought new within the last 18 months. The same can be seen at any time previous to the day of sale.

A Brake will leave Tabb's Hotel, Redruth, on the arrival of the 12 o'clock train to convey intending buyers to the places of sale.

The sale will commence at Wheal Uny Mine, at 12·30 precisely.

Catalogues may be had on application to Messrs. McCULLOCH and CUMMINS, contractors, Mr. GEO. S. BRAY, Solicitor, Redruth, or at the offices of the Auctioneer, 33, Fore-street Redruth.

Dated March 9th, 1882.

FOR SALE:—

ONE 50 inch and ONE 40 inch PUMPING ENGINES, with BOILERS and FITTINGS.

ONE 22 inch ROTARY ENGINE.

ONE 12½ inch HORIZONTAL ENGINE, with CAPSTAN and HAULING MACHINE attached.

All the above Engines are in first-class condition.

Several WATER-WHEELS, from 20 to 60 feet diameter. STAMPS' AXLES, and a large quantity of SECONDHAND MINING MATERIALS.

Apply to J. and H. PEARCE, TAVY IRONWORKS, TAVISTOCK.

FOR SALE, a 30 H.P. PORTABLE STEAM ENGINE; with link-motion reversing gear, has drum and gearing complete for winding and pumping.

A 14 H.P. PORTABLE WINDING and PUMPING ENGINE.

Also a 6 H.P. PORTABLE HOISTING ENGINE.

Apply to—

BARROWS AND STEWART, ENGINEERS, BANBURY.

ON SALE, NEW PAIR of 20 in. HORIZONTAL WINDING ENGINES, 3 ft. 6 in. stroke, wrought iron cranks, crank shaft, 9½ in. diameter, 11 ft. 6 in. centres.

20 horse PORTABLE WINDING ENGINE, with two 10¼ in. cylinders, link motion, and winding gear, drum 5 ft. 6 in. diameter, only worked a few weeks, and since been thoroughly overhauled by the makers; equal to new.

T. JOHNSON, 72, DICCONSON STREET, WIGAN.

SECOND-HAND, BUT EQUAL TO NEW:—

STEAM BOILERS.—Three first-class Boilers, 30 ft. by 7 ft., two flues, Galloway tubes in, and fittings, four years old, insured at 75 lbs. pressure. Will be sold cheap.

BOILERS.—Two Boilers, 28 ft. by 7 ft., two flues. Been working at 65 lbs. Price on rails, £130 each.

Other sizes of Boilers in stock, in excellent condition, 28 ft. by 7 ft., 24 ft. by 7 ft., 24 ft. by 6 ft., 20 ft. by 5 ft., 15 ft. by 5 ft., and 12 ft. by 5 ft. Safe for 65 and 60 lbs. pressure. Very cheap.

PUMPING ENGINES.—Beam and Horizontal. Diameters of cylinders, 100 in., 90 in., 65 in., 60 in., and 38 in. Very cheap.

WINDING ENGINES and COLLIERY PLANT of every description, second-hand, in stock.

H. HELLEWELL AND CO., 4, NORTH CORRIDOR, ROYAL EXCHANGE, MANCHESTER.

FOR SALE.—TWELVE VALUABLE ARGENTIFEROUS NEW COPPER AND LEAD MINES, "HVIDESEID SILVER AND COPPER MINES," which are now prepared for sale, and explored by an expert mineralogist and an English mining engineer, who recommend the mines extremely.

Full information by ENGVALD HANSEN, District Physician, Aamlid, Tvedestrand, Norway.

PUMPS, AT GREATLY REDUCED PRICES:—

NEW, HORIZONTAL—Two 12 × 8; one 3 × 2; one 3 × 1½; one 7 × 5, with condenser; one new treble barrel, 4 in. rams, for horse power.

DONKEYS.—Two 5½ in. cylinder, 9 in. stroke, 3 in. ram.

PULSOMETERS.—One No. 1, and foot valve; one No. 3, and foot valve.

SECONDHAND, HORIZONTAL.—One 12 × 5; one 6 × 5; one 5 × 3; one 3 × 1½; one 6 × 3.

DONKEYS.—One 8 × 10 × 4½; one 6 × 3½.

PULSOMETERS.—One No. 1. CENTRIFUGAL—One 4 in.; one 8 in., by Gwynne; one 8 in., Appold's.

One Holman's double Force-pump, 5 in. cylinder.

All in first-class order, and by eminent makers.

Full particulars and prices from the owner—

CHARLES D. PHILLIPS,

"MACHINERY REGISTER" OFFICES, NEWPORT, MON.

N.B.—SPECIALITE—Lathes, Drilling Machines, and Engineers Machine Tools generally.

FOR SALE, TWO LIFTS OF PUMPS, each about 100 yards long, with rods, T-beams, bell crank, and wheels; 12 inch working barrel, with slides and stalks.

Apply, W. GAMBLE, Machinery Merchant, West Bromwich.

ATTRACTIVE ENTERPRISES—LARGE PROFITS WITH LIMITED RISK.

CAPITAL IS REQUIRED FOR OPENING CORNISH MINERAL PROPERTIES, of more than usual promise, and held on very favourable terms. The Advertiser desires the co-operation of one or more capitalists to associate with him to develope the properties, or would be willing to sell the setts or to negociate terms for constituting a company to work them. They comprise—

A SILVER-LEAD SETT.

A COPPER SETT.

A GOOD SLATE QUARRY.

For full particulars, and to treat, apply to Mr. W. PAYNTER, Jun., Commission Agent and General Merchant, Wadebridge, Cornwall

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At GRANGEMOUTH, on FRIDAY, 24th March.

IMPORTANT SALE, BY AUCTION, OF CONTRACTORS PLANT, including

40 6 ton PERMANENT WAGONS.
6 PERMANENT STONE or BALLAST WAGONS.
150 3 yard SIDE and END TIPPING EARTH WAGONS.
2 STEAM NAVVIES, by Rustin and Proctor.
11 in. and 12 in. LOCOMOTIVES, by Barclay, Kilmarnock.
20 h.p. SEMI-PORTABLE ENGINE and BOILER, by Marshall and Son.
Several PORTABLE ENGINES and BOILERS.
Hand and steam DERRICK CRANES, from 1½ to 3 tons.
Large quantity relayable RAILS, 75 lbs. per yard, Caledonian section, with chains, fish-plates, and spikes also.
STEEL and IRON F. B. RAILS, 41 lbs. per yard, with fish-plates and bolts.
Large quantity service SLEEPERS, cast and malleable SCRAP, and other valuable MATERIALS connected with a large contract.

The property of Messrs. CHARLES BRAND and SON, and sold owing to the completion of the New Docks' Contract.

JAMES LAIRD has received instructions to SELL, as above, on FRIDAY, 24th March.

Further particulars in catalogues to be had one week prior, from Messrs. BRAND and SON; or from the Auctioneer.

26, West Nile-street, Glasgow, 1st March, 1882.

FOR SALE, DIRECT-ACTING (Hathorn and Davey's) DIFFERENTIAL CONDENSING PUMPING ENGINE, by Messrs. Fletcher and Co., Derby. Cylinder, 30 in. diameter; stroke, 36 in.; pumps, 15 in.; lift (minimum) 700 gallons per minute to at least 200 ft.; is perfectly new, having never left the makers' works; originally cost nearly 800*l.*; made for a foreign coal company who, having no present use for it, are willing to make a considerable sacrifice; offers invited; delivery at works.

For full particulars, address "S. P.," No. 4, The Sanctuary, Westminster.

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COUPONS OF SHARES 322

Gold in bars produced in the month of January, 1882, and remitted to Messrs. Baring Brothers and Co., London, 8115 57·100 ozs.

DIVIDEND distributed for each coupon, $200.

(Signed) A. LICCIONI, President.
(Signed) VICTOR T. GRILLET, Treasurer.

ONTARIO SILVER MINING COMPANY.—DIVIDEND No. 77.

The regular MONTHLY DIVIDEND of FIFTY CENTS (2s.) PER SHARE has been DECLARED for FEBRUARY, PAYABLE at the office of the Transfer Agents, Wells, Fargo, and Co., 65, Broadway, on and after 15th instant.

The above dividend is payable at our office on all stock registered in England.

EIVES and ALLEN, Agents, 99, Cannon-street, E.C.

LA PLATA MINING AND SMELTING COMPANY.—The Directors have appropriated $20,000, or FIVEPENCE PER SHARE, from the profit realised in February, to the PAYMENT, on 1st April, of the 31st consecutive MONTHLY DIVIDEND.

The London Dividend List closes on 25th instant.

F. ANDREWS.

21, Great Winchester-street, E.C., London, 17th March, 1882.

MOUNT CASHEL IRON ORE MINES, CO. ANTRIM, IRELAND.

The Advertiser solicits an OFFER for the WHOLE or PART of TWENTY fully paid-up £100 shares.

Address, "G. W. B.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

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This novel and useful scale comprises:—

1. 6 in. ordnance scale.—2. Ditto in feet.—3. Larger ordnance scale 1-2500.—4. Ditto in feet.—5. 2 chains to the inch.—6. Ditto in feet.—7. 3 chains to the inch.—8. Ditto in feet.—9. Table giving the tonnage price of coal at the various rental value per foot per acre.—10. Table giving the acreage per square inch for scales varying from 6 in. to 80 in. per mile.—11. Table giving the weights of the chief gases, liquids, and solids.

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A DELICIOUS BEVERAGE AND TONIC.

IMPORTANT TESTIMONIAL.

Queen's Crescent, Haverstock Hill, London, March 5th, 1881.

DEAR SIR,—Some time since, being greatly fatigued with overwork and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk.

As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, "without the assistance of a doctor."

I am now giving it to my son, twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad.

Enclosed you have cheque. Please send me two dozen of the "Extract." With thanks for your prompt attention to my last

I am Sir, yours truly,

GEORGE A. TYLER.

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Sold by all Druggists in Bottles 2s. 9d. and 4s. 6d. each. Ask for Coleman's Liebig's Extract of Meat and Malt Wine, and "See that you get it."

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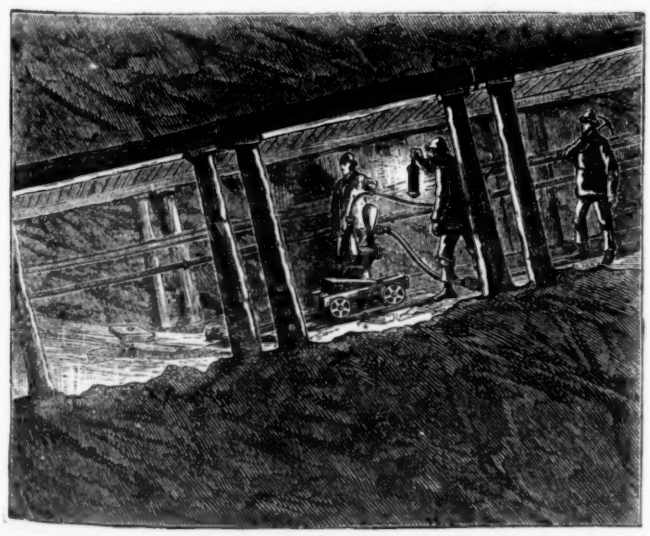

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NO WEARING PARTS, EXCEPT THE SIMPLE VALVES, which are replaceable by any one.
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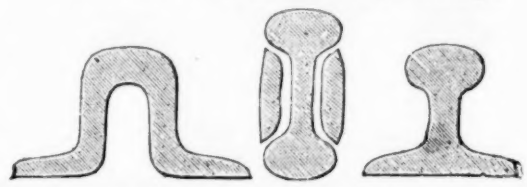

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10000	Mellanear, *c,* Hayle*	2 0	0...	4½...	4 4½	... 1 12	0... 0 2	0...Feb. 1882
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8146	Ditto	1 5	0...	3½...	3 3½	... 0 9	3... 0 1	3...Nov. 1881
2000	North Levant, *t, c,* St Just	13 6	0...	4½...	3½ 4½	... 4 16	0... 0 3	0...Feb. 1881
4760	Penhalls, *t,* St. Agnes†	3 17	6...	1 ...	¾ 1	... 3 17	0... 0 1	6...Jan. 1881
6000	Pennant, *l, bar,* North Wales*	5 0	0...	5 ...	4½ 5	... 0 10	0... 0 5	0...Mar. 1878
12000	Phœnix United, *t, c,* Link.§	6 0	3...	3 ...	2¾ 3	... 17 0	0... 0 2	6...Mar. 1880
18000	Pr. Patrick,* *s-l,* (als.12000pf.10 p.c)	1 0	0...	— ...	...	0 18	6... 0 2	0...July 1880
10000	Red Rock,* *l,* Cardigan	2 0	0...	2 ...	1 2	... 0 4	0... 0 2	0...Jan. 1878
12000	Roman Gravels, *l,* Salop*	7 10	0...	9½...	9 9½	... 8 16	0... 0 5	0...Dec. 1881
4000	Rhydalun,* *l,* Wales	10 0	0...	— ...	...	0 5	0... 0 5	0...Feb. 1880
512	South Caradon, *c,* St. Cleer†	1 5	0...	27½...	22½ 27½	...749 0	0... 1 0	0...July 1880
6123	South Condurrow, *t, c,* Camborne†...	6 5	6...	9½...	9 9½	... 8 18	0... 0 5	0...Jan. 1882
9000	South Darren, *l,* Cardigan*	1 16	0...	1¼...	1 1¼	... 0 4	0... 0 2	0...Apr. 1880
4500	South Wheal Frances, *t,* Illogan†...	7 12	4...	15 ...	13½ 14½	... 40 15	6... 0 10	0...July 1880
6000	Tincroft, *c, t,* Pool, Illogan†§	11 16	0...	15 ...	14 15	... 51 3	6... 0 5	0...Dec. 1881
15000	Van, *l,* Llanidloes*	4 5	0...	7½...	7 7½	... 25 8	0... 0 2	6...Jan. 1882
3000	West Chiverton, *l,* Perranzabuloe†§	21 7	6...	½...	⅜ ½	... 55 10	0... 0 10	0...Feb. 1878
12000	West Holway,* *l,* Flintshire	1 0	0...	1½...	1 1½	... 0 1	0... 0 1	0...Oct. 1881
512	West Tolgus, *c,* Redruth	95 10	0...	22½...	15 20	... 33 0	0... 1 0	0...Jan. 1879
1200	West Wheal Seton, *c,* Camborne†§...	28 0	0...	27½...	40 45	...223 0	0... 0 7	6...Apr. 1878
6000	West Basset, *t,* Illogan†	7 0	4...	14 ...	13 14	... 27 17	0... 0 5	0...Oct. 1881
12000	Wheal Crebor, *c,* Tavistock	2 4	0...	2½...	2¼ 2½	... 0 13	9... 0 1	0...Mar. 1882
1024	Wheal Eliza Consols, *t,* St. Austell..	18 0	0...	— ...	...	... 42 10	0... 8 0	0...Aug. 1880
15000	Wheal George,* *l, bl,* Carnarvon	1 0	0...	3¼ ...	3 3¼	... 0 1	0... 0 1	0...Feb. 1882
6000	Wheal Grenville, *t,* Camborne	15 0	0...	11½...	11 11½	... 1 0	0... 0 7	6...Feb. 1882
4295	Wheal Kitty, *t,* St. Agnes	5 4	6...	1¼...	1½ 1⅝	... 12 18	6... 0 1	6...Jan. 1881
3000	Wheal Peevor, *t,* Redruth	7 11	0...	10½...	12 13	... 8 9	6... 0 5	0...Nov. 1881

FOREIGN DIVIDEND MINES.

Shares.		Paid.	Last wk.	Clos. pr.	Total divs.	Per sh.	Last pd.
35500	Alamillos, *l,* Spain*†	2 0	0...	1¾...	1¼ 1¾	... 2 5	8... 0 1	8...Mar. 1882
130000	Almada and Tirito Consol., *s*†	1 0	0...	⅜...	⅛ ⅜	... 0 6	3... 0 1	0...May 1876
20000	Australian, *c,* South Australia†	7 7	6...	1⅞...	1⅝ 1⅞	... 1 5	6... 0 2	0...Aug. 1881
15000	Bradseye Creek, *g,* California*	4 0	0...	1¼...	1½ 1¼	... 0 18	0... 0 2	0...June 1881
20000	Cape Copper Mining,*† South Africa	7 0	0...	50 ...	49 51	... 45 7	6... 1 0	0...Mar. 1882
35000	Cesena Sulph. Co., Romagna, Italy*	10 0	0...	— ...	...	1 1	0... 0 1	0...Aug. 1879
50000	Copiapo, *c,* Chili* (£4 shares)†	3 8	0...	3½...	2⅞ 3½	... 1 17	9... 0 2	0...Mar. 1882
70000	English & Australian,*† *c,* S. Aust...	2 10	0...	1¼...	1 1¼	... 3 0	9... 0 1	0...Mar. 1882
25000	Fortuna, *l,* Spain*†	2 0	0...	4 ...	3½ 4	... 8 1	0... 0 1	10...Mar. 1882
60000	Frontino & Bolivia, *g,* New Gran.*†	2 0	0...	3 ...	2¾ 3	... 0 8	0... 0 2	0...Jan. 1881
200000	La Plata, *s-l,* Leadville†	2 0	0...	2¼...	2 2¼ xd...	0 10	0... 0 0	5...Mar. 1882
15000	Linares, *l,* Spain*†	3 0	0...	5 ...	4½ 5	... 18 19	10... 0 2	0...Mar. 1882
66000	New Quebrada, *c,* Venezuela†.....	5 0	0...	4¼...	3¾ 4¼	... 0 5	6... 0 3	0...July 1881
1000	Ditto, Debentures	100 0	0...	100...	95 100	...	6 per cent.	...
3000	Oregon, *g,* Oregon, U.S. (pref. sh.)	4 0	0...	— ...	...	... 0 2	6... 0 2	6...Dec. 1880
50000	Panulcillo, *c,* Chili*†	4 0	0...	6 ...	5¾ 6¼	... 0 16	9... 0 3	6...Oct. 1881
25000	Pitangui,* *g,* Brazil (in. 6000 £1 pd).	0 10	0...	— ...	...	0 1	0... 0 1	0...Sept. 1880
10000	Pontgibaud, *s-l,* France†	20 0	0...	11 ...	9 11	... 28 17	6... 0 7	3...Dec. 1880
100000	Port Phillip, *g,* Clunes*† (£2 shares)	1 0	0...	⅜...	1⅛ ⅜	... 1 14	2... 0 0	10...Feb. 1881
50000	Rara Fortuna,* *s,* Argent. Republic.	1 0	0...	— ...	...	... 0 2	0... 0 1	0...Jan. 1882
54000	Richmond Consol., *s,* Nevada*†	5 0	0...	11 ...	11¼ 11¾	... 13 11	6... 0 10	0...Feb. 1882
24532	Rio Tinto,*c, Mortgage Bds.,Huelva.	100 0	0...	103 ...	101 103	...	5 per cent.	...July 1880
325000	Ditto, shares	10 0	0...	26½...	25½ 26½	... 0 18	0... 0 8	0...Nov. 1880
40000	Santa Barbara,* *g,* Brazil	0 10	0...	— ...	...	... 0 11	9... 0 1	0...June 1880
120000	Scottish-Australian Mining Co.*†	1 0	0...	1⅝...	1¾ 1⅝	...	10 p. cent.	...Oct. 1881
80000	Ditto, New	0 10	0...	⅞...	⅞ ⅞	...	10 p. cent.	...Oct. 1881
50000	Sentein,* *s-l, bl,* Ariège, France.....	1 0	0...	1½...	⅜ 1½	... 0 2	0... 0 2	0...Jan. 1881
22500	Sierra Buttes, *g,* California*†	2 0	0...	1½...	1¼ 1½	... 2 2	6... 0 1	0...Apr. 1881
40625	Ditto, Plumas Eureka	2 0	0...	2 ...	1¾ 2	... 2 13	0... 0 3	0...Apr. 1881
100000	So. Indian,* *g,* Madras (fully pd.)†	1 0	0...	1⅛...	¾ 1	... 0 4	0... 0 4	0...Aug. 1881
253000	St. John del Rey*† (£5 Stock and multiples | dealt in)...			180 190	... 5	per cent. for half-year,	Dec. 1881
92566	Tharsis,* *c, sul,* Spain (31000s. 7½.p.)†	10 0	0...	41½...	40½ 41½	... 6 10	0... 2 10	0...June 1881
20000	Tolima,* *g, s,* Columbia	5 0	0...	4 ...	3½ 4	... 2 1	6... 0 5	0...Dec. 1881
25000	Victoria* (London), *g,* Australia	1 0	0...	— ...	...	0 13	10... 0 0	8...Feb. 1881
100000	Victorine (Nevada, U.S.) Deb. Bds...	1 0	0...	— ...	...	... 0 0	6... 0 0	6...Sept 1881
15000	Western Andes, *s,* Colombia	5 0	0...	— ...	...	... 3 6	0... 0 6	0...Aug. 1880
2100	W. Prussian (5500 pref. sh. £10 pd.)	10 0	0...	10 ...	9 10	... 4 2	0... 0 8	0...Apr. 1881

§ Have made calls since last dividend was paid.

NON-DIVIDEND BRITISH MINES.

Shares.		Paid.	Last wk.	Clos pr.
30000	Alston United,* *l,* Cumberland	1 0	0...	1¾... ¾ 1¾
12000	Assheton, *l,* Carnarvonshire*	5 0	0...	¾... ½ ¾
11583	Bedford Unit..* *c,* Tavis.(£1 liab.)...	0 12	0...	1⅛...1⅜ 1⅛
30000	Bodidris,* *l, bl,* Denbighshire	1 0	0...	— ...
30000	British,* *s-l, bl,* Wrexham	1 0	0...	— ...
30000	Bruno Consols,* *s-l,* Flintshire;	1 0	0...	— ...
20000	Bwlch United,* *l,* Cardigan	0 17	6...	2 ...1½ 2
50000	Cambrian,* *s-l, c,* Cardiganshire	2 0	0...	⅜... ¾ ⅜
50300	Carn Camborne,* *t, c,* Camborne	1 0	0...	1⅛... 1 1⅛
20000	Carnarvon,* *c,* Carnarvonshire	1 0	0...	⅞... ⅝ ¾
37500	Carnarvonshire Cons.,* *l,* Llanrwst.	2 0	0...	1⅛... 1 1⅛
30000	Carpella Consols,* St. Stephens	1 0	0...	1⅛... 1 1⅛
6000	Cathedral Cons., *c, t,* Gwennap	0 13	0...	— ...
20000	Central Foxdale,* *l,* Isle of Man	1 17	6...	2¼... 2 2¼
25000	Coed-y-Fedw&Pant-y-Buarth,* *l* ...	1 0	0...	1½... 1 1½
2450	Cook's Kitchen, *t,* Illogan†	30 14	9...	33 ...31 32
10000	Cornwall Great Cons.* (4500 issued)	1 0	0...	2 ... 1 2
6400	Crook Burn,* *l,* Cumberland	0 17	0...	½... ⅜ ½
14000	Crosswood Mining Lands, *l**	1 0	0...	1¼... ¾ 1¼
45000	D'Eresby Mountain, *l, bl,* Llanrwst.	0 10	0...	2 ... 1 2
20000	Denbighshire Consolidated,* *l*.....	3 0	0...	1 ... 1 2
12000	Derwent,* *l,* Durham	4 0	0...	1½... 1 1¼
50000	Devon,* *c, bl,* Tavistock	1 0	0...	¾... ⅝ ¾
60000	Devon Friendship,* *c, ars,* Tavistock	1 0	0...	⅝... ½ ⅝
12000	Devon Great United* (2*l.* shares) ...	1 5	0...	¾... ⅝ ⅞
50000	Drakewalls,* *t, c* Calstock	0 15	0...	⅞... ⅝ ⅞
10000	Dubby Syke, *l,* Durham*	1 0	0...	1s.... 6d. 1s.
12000	East Blue Hills, *t,* St. Agnes	0 5	0...	⅜... ½ ⅝
6000	East Botallack, *t,* St. Just	0 8	0...	— ...
6144	East Caradon, *c,* St. Cleer†	4 6	0...	⅜... ⅜ ¼
4000	East Chiverton, *l,* Perranzabuloe ...	10 7	3...	— ...
30000	E. Craven Moor,* *l,* Pateley Bridge	1 0	0...	— ...
15000	East Devon Cons.,* *c,* Buckfastigh.	2 0	0...	3 ... 2⅛ 3
30000	East Herodsfoot, *s-l,* Liskeard	1 0	0...	1 ... ¾ 1
20000	East Long Rake,* *l,* Wales	1 0	0...	1¼... 1 1¼
21000	East Roman Gravels,* *l,* Salop	0 15	0...	1 ... ⅞ 1
18000	East Van, *l,* Llanidloes*	5 0	0...	1 ... ¾ 1
2048	East Wheal Lovell, *t,* Helston	15 13	6...	2 ... 1 2
100000	East Wheal Rose,* *s-l,* Newlyn East	0 17	6...	⅞... ¾ ⅞
12000	Gawton,* *c,* Tavistock (2*l.* shares)...	1 16	0...	⅝... ⅜ ⅝
40000	Glasg. Car.,c* [30000sh. £1 pd., 10000	15s. pd.]		⅝... ⅜ ⅝
14000	Glenroy,* *s-l,* Isle of Man	4 0	0...	½... ½ ½
30000	Gobbett,* *t,* Dartmoor	1 0	0...	1¼...1⅛ 1¼
10000	Goddards,* *l, b,* Carnarvon	1 0	0...	1¼... 1 1¼
32000	Goginan,* *l,* Cardiganshire	1 0	0...	1½... 1 1½
25000	Goodevere, *t,* St. Cleer	1 0	0...	1¼...1⅛ 1¼
8000	Gorsedd and Merllyn Cons.,*t, Flint.	2 10	0...	3 ...2½ 3
20000	Great Dyliffe* (10000 sh. issued) ...	1 0	0...	— ...
00000	Great Polgooth United,* *t*	1 0	0...	¾... ⅝ ¾
6000	Great West Chiverton, *l,* St. Agnes.	0 5	0...	⅜... ¼ ⅜
10000	Gwern-y-Mynydd,* *s-l,* Flint(pref.)	4 0	0...	— ...
70000	Gwydyr Amal.* *l, bl,* Carnarvon	1 0	0...	¾... ¾ ¾
12000	Herodsfoot, *l,* near Liskeard†	0 13	9...	¾... ¾ ¾
18000	Hingston Down, *c,* Calstock*†	0 12	0...	1⅛... ¾ 1
20000	Kirkmichael,* *l* (2000 unissued)	1 0	0...	1⅛... 1 1⅛
6000	Killifreth, *t,* Chacewater	4 3	6...	2⅜...2⅜ 2⅜
25000	Kit Hill Gt. Cons.* *c, ars-m,* (2*l.* sh.)	0 15	0...	¼ ... ⅜ ⅜
15000	Lady Ann,* *s-l,* Llanarmon	1 0	0...	— ...
30000	Lady Ashburton,* *s,* Callington	1 0	0...	⅛... ⅛ ⅛
15000	Lady Bertha,* *c,* Tavistock	1 0	0...	— ...
25000	Langford,* *s, c,* Callington	0 10	0...	¾... ½ ¾
2500	Levant, *c, t,* St. Just	11 10	0...	5 ... 4 5
15000	Llandegla,* *l,* Wales	1 0	0...	— ...
10000	Lomax,* *s-l,* Helston	1 0	0...	1¼... 1 1¼
5120	Lovell, *t,* Wendron	0 16	0...	1¼... 1 1½
9000	Marke Valley, *c,* Linkinhorne†	6 11	0...	1 ... ¾ 1
6000	Medlyn Moor, *t,* Wendron	3 15	10...	— ...
23000	Mid-Devon,* *c* (& 17000, 3s. 4d. pd.)	0 6	8...	— ...
20000	Mona Consols,* *c,* Anglesea	1 0	0...	1⅜...1⅝ 1⅜
15000	Monkstown,* *man,* Devon	2 0	0...	— ...
20000	Mostyn Consols,* *s-l,* Flint	1 0	0...	2⅛...2¾ 2⅝
10000	Mynydd Gorddu, *l,* Cardigan*	4 0	0...	4 ... 3½ 4
12000	Morfa Du, *z, g, s,* Anglesea*	1 0	0...	¾... ½ ¾
80000	Mounts Bay,* *c, t,* Breage	0 15	0...	— ...
6144	Mount Carbis, *t, c,* Redruth	1 5	0...	3½...3½ 3¾
2400	New Cook's Kitchen, *t,* Illogan	8 10	0...	5 ...4½ 5
8000	New Dolcoath, *t, c,* Camborne*	3 0	0...	— ...
100000	New Great Wheal Vor, *t,* Breage	0 10	0...	⅝... ½ ⅝
10000	New Holmbush,* *t, c,* Callington	2 10	0...	— ...
6000	New Kitty, *t,* St. Agnes	0 10	0...	2¼...1½ 2
12000	New Penrose,* *t, c,* Helston	1 0	0...	1¼...1⅜ 1¼
15000	New Redmoor,* *var,* Callington	1 0	0...	1¼... 1 1¼
3500	New Tincroft, *t,* Lelant	6 0	0...	— ...
2000	New Trumpet,* *t,* Wendron	0 10	0...	1¼... 1 1¼
12000	New West Caradon, *c,* Liskeard	0 3	6...	⅜... 1/16 3/16
3000	New Wheal Peevor, *t,* Redruth	0 10	0...	⅝... ½ ⅝
35000	New Wye Valley, *t,* Montgomery.*	1 0	0...	1 ... ½ 1
20000	North Alfred, *c,* Phillack	0 10	0...	1⅜...1⅝ 1⅜
5328	North Busy, *t, c,* Scorrier §	1 5	8...	¼... ¼ ½

NON-DIVIDEND MINES—*continued.*

Shares.		Paid.	Last wk.	Clos pr.
10000	N. D'Eresby Mount..* *l, bl,* Carnarv.	1 0	0...	⅜... ⅜ ⅜
25000	North Goginan,* *l,* Cardiganshire...	1 0	0...	1⅜... 1 1⅜
6400	North Green Hurth,* (3400 *l.* pd.).	0 2	6...	⅜... ⅜ ⅜
12000	North Herodsfoot, *l,* Liskeard	0 8	6...	⅜... ⅜ ⅜
50000	North Molton,* *c, mn, t,* Devon.....	1 0	0...	⅜... ⅜ ⅜
6000	North Penstruthal, *t, c,* Gwennap...	1 19	6...	— ...
2936	North Treskerby, *c,* St. Agnes	8 17	10...	⅝... ⅝ ⅝
8000	Northern,* *l,* Durham	1 0	0...	— ...
40000	Okel Tor,* *t, c, a,* Calstock	1 0	0...	1 ... ¾ 1
80000	Old Shepherds *s-l,* Cornwall	0 15	0...	1⅛... 1 1⅛
12000	Pandora,* *l,* Carnarvon.....	2 0	0...	— ...
11612	Pant-y-Mwyn,* *l,* Mold	2 0	0...	¾... ⅝ ¾
45000	Parys Corporation,* *c,* Anglesea ...	1 0	0...	— ...
7500	Pateley Bridge, *l,* Yorkshire	1 0	0...	⅞... ½ ⅝
6000	Pedn-an-drea, *t,* Redruth	2 13	0...	— ...
12000	Pelyn Wood, *c,* Lanivery	0 5	6...	¾... ¾ ¾
600	Pendarves United, *c,* Camborne.....	8 0	0...	¾... ¾ ¾
12000	Pen-yr-Orsedd,* *l,* Flintshire	1 0	0...	— ...
15000	Perran Consols,* *s-l*.....	1 0	0...	1 ... ¾ 1
100000	Pioneer,* *var.* Wales	1 0	0...	1¼... ¾ 1¼
10000	Polrose, *t,* Cornwall	0 16	0...	1¼... 1 1¼
10000	Port Nigel,* *s-l,* Carnarvonshire ...	2 0	0...	⅜... ⅜ ⅜
6000	Prince Royal, *t, c, s-l,* St. Agnes ...	1 0	6...	2 ...1½ 2
12000	Prince of Wales, *c, s,* Calstock	0 13	0...	— ...
15000	Royalton,* *t,* St. Columb	1 0	0...	⅝... ⅜ ⅝
36000	Russell United,* *c,* Tavistock	0 15	6...	1¼... ¾ 1¼
30000	Silver Hill,* Callington	0 10	0...	1¼... ¾ 1
50000	Sinclair,* *l, bl,* Whitford	1 0	0...	1¼... 1 1¼
40000	Sortridge,* *c,* Horrabridge	1 0	0...	1¼... 1 1¼
6000	South Carbis, *t, c,* Redruth	0 10	0...	⅜... ⅜ ⅜
35000	So. Devon Unit..* *c,* Buckfastleigh.	1 0	0...	1⅛... 1⅛ 1⅛
5000	South Dolcoath, *c, t,* Illogan	0 12	0...	1 ... ⅞ 1
6000	South Penstruthal, *t, c,* Gwennap ...	1 17	6...	⅛... ⅛ ⅛
6000	South Tolcarne, *t, c,* Camborne	4 14	0...	— ...
40000	South Wheal Crebor*, *c,* Tavistock..	1 0	0...	2¼... 2 2⅛
2043	South Wheal Crofty, *c,* Illogan.....	19 14	6...	8¾... 8 8⅛
40000	Tamar, *s-l,* Bearalston*	1 0	0...	1⅛... 1 1⅛
110000	Tankerville Gt. Consols, *l,* Salop*.	0 15	0...	⅜... ⅜ ⅜
6400	Teesdale,* *l,* Durham (pref.)	1 0	0...	— ...
20000	Tin Hill,* *t,* St. Stephens.....	1 0	0...	1⅛...1⅛ 1⅛
10000	Temple,* *l,* Cardigan.....	1 0	0...	— ...
6000	Tregumbo,* *t, c,* Cornwall	*nil*		1⅛...1⅜ 1⅛
12000	Trevince Consols, *t, c,* Gwennap ...	0 5	0...	¾... ⅜ ¾
10000	Tyn-y-Fron,* *l,* Cardiganshire	1 0	0...	— ...
35000	Un.Van & Glyn,* *l,* (& 17500 pref. sh)	1 0	0...	— ...
1000	Vaughan,* *l,* Cardiganshire.....	10 0	0...	— ...
18000	Victor,* *l,* Cilcen, Flintshire	0 14	0...	— ...
2000	Violet Seton, *c,* Camborne	12 0	0...	20 ... 15 20
20000	Walkham United,* *t, c,* Tavistock...	1 0	0...	— ...
12000	West Assheton, *l,* Carnarvon	1 0	0...	2 ... 1¾ 2
12000	West Caradon, *c,* St. Cleer	0 7	3...	1 ... ¾ 1
3000	W. Craven Moor, *l,* Pateley Brdge*	10 0	0...	— ...
12000	West Crebor, *c,* Tavistock	0 5	0...	⅜... ⅜ ⅜
10240	West Devon Consols, *c,* Calstock ...	1 0	0...	1½... 1 1¼
10000	West Godolphin, *t, c,* Breage	0 18	6...	2¼... 2 2⅜
6000	West Kitty, *t,* St. Agnes	0 12	0...	8½... 8 8⅝
20000	W. Lisburne,* *l,* (1*l.* sh.) Cardigan..	1 0	0...	1⅜...1⅜ 1⅜
3000	West Mary Ann, *l,* Menheniot	1 13	0...	1 ... ¾ 1
20000	W. Pateley Bridge, *l,* Yorkshire.....	1 0	0...	¾... ¾ ¾
12000	West Phœnix, *t, c,* Linkinhorne ...	0 17	8...	1⅛... 1 1⅛
6000	West Polbreen, *t, c,* St. Agnes	0 3	0...	1⅜... 1 1⅜
5190	West Poldice, St. Day†	6 0	0...	6 ... 5 6
2048	West Wheal Frances, *t,* Illogan† ...	31 8	3...	12 ...11 11½
3000	West Wheal Peevor, *t,* Redruth	3 0	6...	14 ...13 14
12000	West Wye Valley,* *l,* Montgomery.	3 0	0...	— ...
6000	Wheal Agar, *c,* Illogan†	15 6	0...	16 ...14 16
6144	Wheal Basset, *c,* Illogan†	6 1	0...	5½... 5 5½
3000	Wheal Boys, *t,* Redruth	0 16	0...	2 ...1¾ 2
12000	Wheal Coates, *t,* St. Agnes	0 2	0...	2¼... 2 2¼
8000	Trevaunance, *t,* St. Agnes	0 2	0...	2¼... 2 2¼
2585	W. Comf., & No. Tres., *t, c,* Gwennap	2 2	0...	2¼... 2 2⅛
50000	Wheal Elizabeth,* *t,* Cornwall	1 0	0...	— ...
5000	W. Fortune,* *s, c, arv,* Harrowbarrow	1 0	0...	3 ... 2¾ 3
12288	Wheal Jane, *t,* Kea†	1 14	2...	1⅜... 1 1⅜
12000	Wheal Jewell, *c,* St. Hilary.....	0 18	0...	⅞... ⅜ ⅞
25000	Wh. Hony and Trelawny, *s-l,* Lisk.	2 0	0...	2¼... 2 2⅛
12000	Wheal Lusky, *t,* Callington	0 1	6...	⅛... ⅛ ⅛
2000	Wheal Owles, *t,* St. Just†	7 3	0...	11 ... 9 11
6000	Wh. Prussia, & Cardrew, *t, c,* Rdrth	2 0	0...	1¼... 1 1¼
6000	Wheal Sisters, *t,* Lelant	3 10	0...	1¼... 1 1¼
4096	Wheal Uny, *t, c,* Redruth	16 3	0...	3¾... 2½ 3
4000	Ystwith,* *l,* Cardigan	1 0	0...	¾... ⅝ ¾

bl, blende; *c,* copper; *g,* gold; *l,* lead; *s,* silver; *sl,* slate; *s-l,* silver-lead; *t,* tin; *z,* zinc; *i,* iron; *a,* arsenic.

* Limited Liability Companies; † quoted on the Stock Exchange; § have paid dividends

NON-DIVIDEND FOREIGN MINES; FOREIGN AND MISCELLANEOUS STOCKS; TRAMWAYS; INSURANCE COMPANIES; GAS, IRON AND COAL, WAGON COMPANIES, &c.

NON-DIVIDEND FOREIGN MINES.

Shares.		Paid.	Last wk.	Clos. pr.
50000	Akankoo,* *g,* Gold Cst.(100000 iss.)	0 7	6...	½... ¾
64880	Anglo-African,*d, Kimberley,§	2 0	0...	7 ... 8
12000	Arendal, *c,* Norway	4 0	0...	— ...
120000	Asia Minor,* *s-l,* Lidjessy, Sivas ...	0 7	6...	— ...
30000	Bratsberg,* *c,* Norway	2 0	0...	1¼... 1½
40000	Brazilian, *g,** Brazil	1 0	0...	1 ... 1½
200000	British Australian,* *g,* N. So. Wales	1 0	0...	— ...
18000	Broadway,* *g,* California.....	5 0	0...	5¼... 6
10000	Buena Ventura,* *i,* Spain (fy.pd)...	2 0	0...	— ...
30000	California,* *g,* Colorado	1 0	0...	— ...
130000	Callao Bis,*g, Venezuela	1 0	0...	— ...
15000	Canada,* *g*	1 0	0...	— ...
82500	Canadian, *c, sul,** Canada†	4 0	0...	1 ... 1